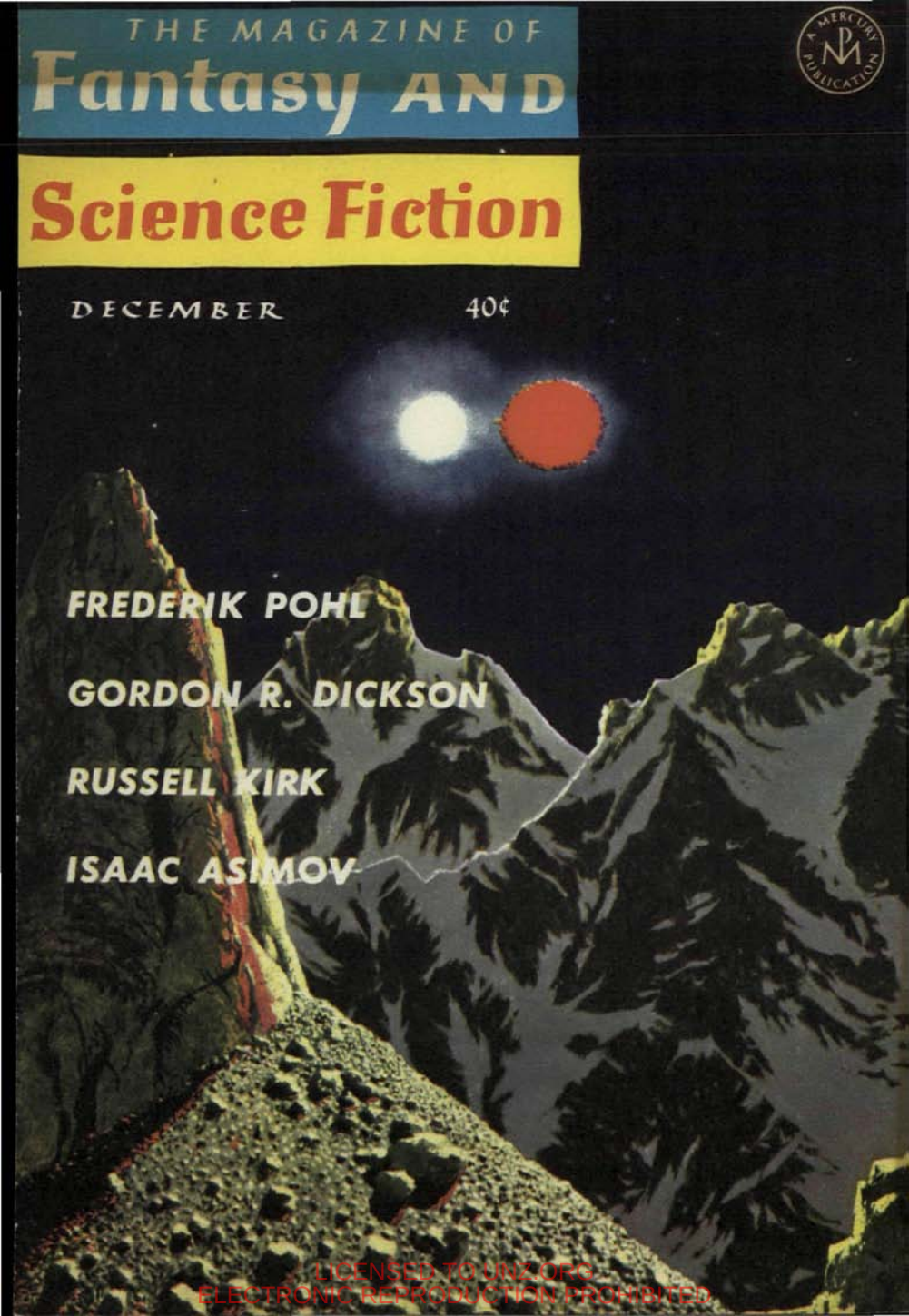
THE MAGAZINE OF

Fantasy AND Science Fiction

A MERCURY PUBLICATION

DECEMBER 40¢



FREDERIK POHL

GORDON R. DICKSON

RUSSELL KIRK

ISAAC ASIMOV

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Fantasy and Science Fiction

DECEMBER *Including Venture Science Fiction*

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The Magazine of Fantasy and Science Fiction, Volume 23, No. 6, Whole No. 139, Dec. 1962. Published monthly by Mercury Press, Inc., at 40¢ a copy. Annual subscription $4.50 in U. S. and Possessions, $5.00 in Canada and the Pan American Union; $5.50 in all other countries. Publication office, 10 Ferry Street, Concord, N. H. Editorial and general mail should be sent to 347 East 53rd St., New York 22, N. Y. Second Class postage paid at Concord, N. H. Printed in U. S. A.

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In this issue . . .

. . . is a distinguished pair of articles by a distinguished pair of writers, **PROFESSOR ASIMOV** and Mr. **FREDERIK POHL,** commenting on two phases of the same significant subject. **SASHA GILIEN,** our Fantasy Discovery of the Year, makes another triumphal entry with a way-*way*-out tale guaranteed to send those who take dreams too seriously into french-freud fits. **GORDON DICKSON** relates a long story and a deadly serious one; **RUSSELL KIRK,** who last month chilled our blood in a Scottish castle, performs the same task for us in a hideously decayed American backwater; **JIM HARMON** extrapolates on the possibilities of a bigger-and-better Mohole, with results both amusing and confusing. There are two newcomers—**HENRI DAMONTI,** of the Belgian bar, whose story (smoothly translated by **DAMON KNIGHT**) goes far to explain many a so-called disappearance—and **DR. FELIX MARTI-IBANEZ** (who must have tarried once in Brazil but who is originally from Spain) in a rich and aromatic *roman* about sorcery, an artificial leg, and love . . . love . . . love . . .

Coming next month . . .

. . . is **MACK REYNOLDS,** who here travels into a world of a future America. "Speak the word and it shall come to pass," sayeth the Prophet. "The word is not the thing," counters the Professor. "Let the technicians take over," demands the Technocrat. And the aged Mr. Speaker quavers to the questing King, "Sire, I am the servant of this House, and I have neither eyes to see nor lips to speak, save as this House may direct." No freedom is ever absolute, not even freedom of speech, and if the State may limit a man's right to live it may certainly limit his right to speak. A logical speculation concerning all these matters is the foundation of Mr. Reynolds's new novel, *Speakeasy,* cover story for January. Also for January, from the mystic coast of Cornwall, land of Merlin and Morgan le Fay, is **P. M. HUBBARD'S** story of a strange ship and its stranger passengers. The setting is modern, the origins are ancient and odious, the effect is satisfyingly dread. And there will be, of course, other goodly stories, too—besides **L. SPRAGUE DE CAMP'S** nonfictional account of how he hunted a dragon.

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"Despite my protests I was born April 21, 1933," said Jim Harmon, affably, pushing our ace information agent, Mr. Pettifogle, into a chair and lighting a Rum Crook segar for him. "A traditional happy childhood followed—measles, mumps, rheumatic fever. I began selling SF stories at nineteen, and have been selling them ever since . . . are you taking all this down? Good . . . I moved from Mt. Carmel, Illinois to L.A. a year ago, and Discovered Sex. In the past year, I've written two hundred sex stories and fourteen novels. I—"/"Are you married?" inquired Pettifogle. "I have never married," said Jim Harmon, firmly. "I collect radio programs on tape and disc. As far as I know, I have more of this junk than any other agency except the four networks." He paused for our man to catch up. "Among my other Notable Accomplishments," he said, "are editing two issues of an SF magazine (never published), writing two motion pictures (never filmed); and writing, producing, directing, performing in and transcribing a 13-week cycle of radio dramas (never aired). What else do you want to know?" Pettifogle asked what Mr. Harmon did in his spare time. "I spend several hours a week with young people," said Mr. Harmon, "advising would-be writers how they can become Rich and Famous like me." It remains to be added only that the impoverished and obscure Dr. Prof. Isaac Asimov pronounced this story to be "delightful satire" and concluded his appraisal with the single imperative, "Publish!" Trembling in every limb, we have obeyed.

THE DEPTHS

by Jim Harmon

"YOU DON'T KNOW WHAT FEELing low means until you've been in the Depths," the beef-fed businessman told Amel Smith.

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Smith smiled politely, gazed into the three dimensional mural of the Arizona desert on the bulkhead, and blotted the bloom of perspiration from his upper lip.

None of the other passengers seemed concerned. They sat their seats as confidently as cavalrymen would sit saddles. The Light Brigade, for instance, he thought suddenly. *Into the Valley of Death, rode the six hundred . . .*

Can that! Smith warned himself. Can . . . can . . . No, they used plastic bags. He stripped the foil from the tip of a roll of mints and popped one into his mouth. Life-Saver. Really need a . . . Smith shut his eyes hard.

"I'm in steel," the businessman said. "What's your line?"

"I'm a cowboy," Smith informed him.

"Pardon?"

"Rodeo work. Competition. Riding broncs, Brahmas, that kind of thing. It's an organized sport, like baseball. I'm a professional player."

"Come from out west, I suppose?"

"Philadelphia," Smith explained.

"Well," said the businessman, "after riding broncs, you shouldn't let a little thing like this trip . . . *throw* you. Ha-ha. Now, don't take what I said at first about feeling 'low' too seriously. They exaggerate about the Depths."

"No, they don't," Smith said grimly, rubbing his palms over the bony ridges of his long legs. "We are about to descend into the Pit. We are about to experience every terror known to Man."

"All we're going to do, my friend," the beefy businessman said, "is take a simple inner-planetary trip. We are going to take a rocket through a tunnel bored completely through the Earth, from Chicago to Capetown. We are following a law of simple geometry—the shortest distance between two points is a straight line. All those boys making globes after Columbus threw us off but we finally got back on the right track. Every boy who ever tried to dig a hole through to China knew the right way to travel on this planet instinctively."

"Boys play with fire," Smith said, looking around uneasily at the completely windowless compartment.

"First trip jitters, that's all."

Smith felt a muscle jump in the hard ridge of his cheek, and pressed his fingers against it to stop it. "Don't you *see?* We are going *down,* as in going down for the third time. We are *falling* clean through the world. What greater terrors for an aquaphobe or an acrophobe? The oceans of the planet will be over us completely, and we'll be surrounded by the mass of millions of mountains, completely trapped. Alone. Yet with hundreds of people from

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whom we absolutely can not get away. What are we doing? The symbolic nature of our trip can not escape any student of Freud, or even the subconscious of those who *must* neuroticly reject Freud. Where are we headed? According to almost all religions, those powerful primaeval influences, we are heading straight for *Hell!*"

Smith leaned back on his contour seat, and stared ahead. "Such things as air and space travel can't touch inner-planetary travel for terror. It is the ultimate in human *fear.*"

The businessman shifted in his seat. "I'm not so much afraid. Just kind of . . . depressed."

"Of course you feel low. You are sinking into the Depths."

"Look," the businessman said impatiently, "if you feel so dead set against Depth travel, why are you taking this trip?"

"I've got to get to Capetown before midnight tonight in order to collect an inheritance from the estate of an uncle. I've got to give up rodeo work. An allergy."

"Horses?" the businessman asked.

Smith shook his head. "Blood. Psychosomatic, not physiological, of course."

The businessman got up and changed seats.

A pretty blonde girl entered the compartment and sat down next to Smith. Her nose, he observed, was too small.

"Aren't you filled with a feeling of mystical wonder?" the pretty blonde girl inquired of Smith.

Really quite too small, he thought. "Not exactly," he said.

She turned towards him in furious intensity. "Doesn't traveling through the heart of the planet itself make you feel as one with Mother Earth and all her peoples?"

Smith shook his head.

"Then what does going underground make you think of?" she demanded.

"The grave," Smith said. "The walls will crush in upon us, making us one with Mother Earth indeed."

"The walls cannot crush in. They are firmly held back by force beams that would hold them back were they pressing together with ten times their urgency."

The two of them sat back and listened to the gentle blur of words from the driver filtering through the mesh of the speaker.

"Good evening. This is your driver. We will arrive in Capetown, eleven fifty, p.m., African Standard Time. The trip will take forty-four minutes. Inner-Planetary Lines have provided means of amusing yourselves for the duration, and we trust time will not hang heavy on your hands. Thank you."

"Miss," Smith said, "I think perhaps you'd better change your seat. I'm not at all sure I can control myself."

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The girl looked at him, startled. "Surely you can, if you really try. I am a student of Eastern philosophy myself, and have complete authority over my impulses."

A muscle worked in Smith's angular jaw. "I have a horrible fear I am going to make a fool out of myself. I don't know what going into the Depths will do for me. I've always been alarmed at the idea. I may throw a fit. Or something."

"Is *that* all?" the girl said.

"All?" Smith faced her. "Young lady, I am Arizona Amel Smith. I make my living riding the backs of berserk animals, and all of the time, up in the stands, the audience is waiting for me to get thrown and have my head trampled into a bloody mess. It's not merely that they want to see me killed—I could forgive them a natural emotion like that—they want to see me *fall,* to be ingloriously thrown, to lose my dignity, like slipping on a banana peel. Nothing is so funny to them. I don't like to give people a laugh by shedding my blood. Neither do I want to lose my composure on this trip and be a laughing stock."

The girl looked at him steadily. "Mr. Smith, if you don't want that, it never has to happen. The human mind can achieve all it desires." Her gaze faltered. "You told me your name. Mine is Sarah Applewhite. I go to Hunter."

"Sophomore," he said.

"Yes. How did you know?"

Before he could answer, Disaster struck.

The craft's automatic safety system called Disaster, after what it was supposed to prevent, went into action.

The craft jerked to an abrupt halt and the passengers rose from their seats, wafting on the air conduction.

"Null-gravity?" Smith murmured. "Are we at the center of the Earth?"

"Near enough," a junior officer said, kicking forward from the rear. "You've got a few ounces of weight, but it hardly matters. The currents from the forced air-vents will toss you around like feathers."

"I am no dandelion puff-ball," the businessman said. "Shut off the forced air."

"I don't think that would be wise, sir," the junior officer demured. "We should all suffocate in a few moments from the accumulation of carbon dioxide we breathe out."

"In that case," said the businessman, "perhaps you'd better not shut them off."

Smith was terrified, as he had expected to be. Yet, somehow the disaster was gratifying. It vindicated his superior judgement and intuition in expecting it.

He became aware of the girl floating beside him, her face a poem of rapture.

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"Miss Applewhite, are you feeling well?" he asked.

"I feel *wonderful,*" the girl breathed. "Have you ever known a more glorious sensation?"

"You haven't, obviously," Smith said.

The driver appeared in the compartment doorway, a white marble pillar in an ocean of chaos.

"Please keep calm, ladies and gentlemen. Our retro-rockets somehow fired prematurely. Certain adjustments will have to be made. We will be about twenty minutes late."

"That means," Smith said, "I will be five minutes after midnight arriving in Capetown. I'll lose a fortune."

"My wife's going to be angry waiting for me in that depot," the fat businessman observed.

"My husband's going to get suspicious, I don't show up on time," a woman with a British accent observed.

"There is a more urgent trouble," the Hunter sophomore said. "There is another rocket only fifteen minutes behind us in this tube. If we remain twenty minutes behind schedule, five minutes before Capetown, the second rocket will collide with us and we will be blown to Kingdom Come."

Howls of anguish, anger and fear tore through the confined atmosphere of the craft.

Smith nodded thoughtfully to himself. Just as he had expected.

The driver turned a face as stern as the one on an armed forces recruiting poster to the girl. "Miss, I don't really think it was wise to mention the rocket behind us. You seem to have produced rather a bit of stark panic."

"I believe in Truth, driver," she said. "We all have a right to it."

"The fools," the fat businessman observed, looking at the groaning faces about him. "They should know all you have to do is telephone back and have the second rocket fire its retros, too."

"Yes, sir, I'll tell them that in a moment, when they've calmed." The driver then muttered something to himself.

"What was that?" the businessman demanded.

"Nothing," the driver said.

"I know what it was," Sarah Applewhite of Hunter said. "I can read lips. He said, 'I wish it were true'."

"What?" the businessman shouted. "You mean you *can't* telephone back?"

The driver took the businessman's arm and eased him into his armchair. "It might be best if you remain seated. Just use your seatbelt so you don't float about so much. No, sir, it won't be possible to telephone back, Mr.—" he glanced at the illuminated seating chart overhead "—Bosley. The premature retroing caused us to skid against the tunnel wall, shredding the lines."

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Businessman Bosley stared ahead numbly. "Why don't you damned Depth-craft carry radios anyway?"

"Sir," the driver said, "the tunnel is *theoretically* straight, but it takes much less than eight thousand miles for an error of forty-two feet, the width of the tunnel, to occur. Radio depends on essentially straight-line communication."

Bosley sank back, his chin quivering like an elaborate bridge party jello mould. "I—hadn't counted on *that.*"

"Easy, sir, try to take it calmly like Mr. Smith and Miss Applewhite."

As the pilot drifted off, Bosley turned to the cowboy. "Yes, for God's sake, Smith, how can you take this so calmly? Why, you're not only going to die with the rest of us, but good lord, man, you're also losing a fortune!"

Smith studied Bosley calmly, as he has observed the whole situation. Finally, he spoke. One word.

"*Fools,*" he said.

"Pardon?"

"Fools! All of you. Making a routine inner-planetary flight, were you? Well, I *knew* I was heading for my doom. Now who was right, Mr. Bosley, who was right?"

Bosley teethed his underlip like a ripe plumb. "But if you knew, why did you come?"

"Bosley, you just got through saying that I stood to lose a fortune if I didn't complete this trip."

"Yes," said Bosley. "Yes."

Smith settled back and regarded the girl beside him.

"Why are *you* so calm?" Smith asked. "I, at least, have the satisfaction of knowing I was right."

"Mr. Smith, because of my extensive training during the last five months in Zen and Yoga and related philosophies, I have completely mastered all negative emotions, such as fear. I could walk in front of a truck or off a cliff without batting an eye."

In spite of himself, Smith was impressed.

Bosley thinned his lips. "It works, does it? That philosophy stuff? It can make you calm at a moment like this?"

"Absolutely resigned," she assured him.

"You mean I won't run around like a chicken with its head off looking for a way out—some impossible means of escape?" Bosley demanded.

"That would be pretty undignified," Smith observed.

"You needn't worry about that. Just let me explain my philosophy and you'll sit there and die serenely."

"Confession," Bosley babbled. "Confession is good for the soul, and all that rot. You're trying to trick me. You're trying to make me confess!"

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"Absolutely not," Sarah said. "You must *forget* worldly things. You don't want to remind yourself by talking about them."

To Smith, Bosley's face was beginning to look like a stewing tomato.

"Trying to trick me!" the businessman babbled on, as others in the craft began to regard him as distastefully as if he were fingering his nose. "Trick! Trying to make me admit I'm Smith's cousin, that I set a time relay switch to fire the retro-rockets prematurely so Smith would be late and he'd lose his inheritance—*to me.* I know what you're up to. But I won't say it—because I'm not really guilty. I didn't know about the rocket behind us. *I didn't know we would all be killed—I only thought we would be late!*"

Bosley stopped suddenly, aware of what he had said, and aware that everybody had been listening to his shouting.

"Trapped!" Bosley murmured. "Trapped down here with people doomed to die by my hand. Trapped with a bunch of snarling, howling wild animals who will tear me to shreds with their last breath. *Trapped* with the man I was trying to cheat and now who I've murdered!"

Smith averted his tightly controlled eyes. "For God's sake, Bosley, stop making such a damned spectacle of yourself. Everybody is *staring* at us."

Bosley slumped in his seat. "Nevertheless, it's true, every word of it. I'm sorry, Smith. Cousin Amel. Genuinely sorry. Ha! Sorry I've sentenced you all to death. All of you—and all of me. But I didn't know, I didn't know. I thought we'd only be *late,* not that we'd be killed."

A handsome, gray-haired man placed a lean hand on Bosley's shoulder. "There now, we all make mistakes, my dear fellow. Cigaret?" he said.

Bosley started to accept, then shook his head. "I'm trying to cut down. Bad for my throat."

Suddenly, Bosley jerked up his head.

"Poison, is it? Hemlock in the tobacco, is it?" he cried. "No, my friend, you aren't going to dispose of me quite that easily. If you want to lynch me you'll have to do it with a rope. In null-gravity. Ha-ha. I'm guilty. I admit it. But I'll die with the rest of you. That's ironic, poetic justice, isn't it? What does it matter if I die a few moments sooner? You don't have the right to take the law into your own hands. I've committed a crime, but I deserve a fair trial."

Releasing his seat-belt, Bosley kicked free and hung defiantly in mid-air. "I'll defend myself," he warned. "I'll kill the first man who lays a hand on me."

Reluctantly, Smith released his belt and floated up towards his unknown cousin.

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"Bosley," Smith said, "you're as hysterical as the next rider up after a Brahma-goring. I'm going to have to knock some sense back into you, and frankly, I'm going to enjoy it. I really don't much care for being cheated out of a fortune or planted in a death trap."

Smith launched himself at Bosley, but the fat man moved as gracefully as a balloon and kicked the cowboy in the stomach.

But Smith knew how to take a fall as well as Poe's Usher. He jack-knifed and landed on his feet in the middle of nothing, glaring at Bosley who now hung upside down to him.

Spurring himself on, Smith drove his knotted fist in the huge dimple that was Bosley's navel. It drove the angry pain out through the fat man's rounded mouth. Smith flattened the kiss-shaped lips with his other fist, as Bosley, remembering the carefree days of his boyhood, jerked a knee towards Smith's groin.

The rodeo rider caught the pudgy knee on his thigh as he would the ridged back of a bucking horse. He grabbed the crook of the knee and yanked upward, causing Bosley to crack the back of his neck against a bulkhead and to get his beefy shoulders caught in an air vent.

Smith anchored himself to a hand-hold rail used when the craft carried tourist class passengers with an angle of his leg, and used both fists to punish Bosley's distorted, bloated face. The knuckles rang against bone and bridgework, and Bosley's nose and lips puffed and bloomed out in blood.

Something was bothering Smith. Finally, he realized it was the driver who was separating him from Bosley before he killed him.

He allowed himself to be returned to his own seat and strapped down. There he sat staring at his bloodied hands.

"Terrible, isn't it?" Sarah Applewhite said. "The blood of your fellow man on your hand."

Smith turned his hands over and examined them, intrigued by the suppleness of his wrists. "Yes," he said. "There's blood on my hands. Yet I'm not afraid of it, or repulsed by it. But in the arena the merest of gored loins or a mangled foot or just the trace of crimson on a sharp hoof freezes me. I can't understand why I'm all right now. Unless—"

"Go on," the girl urged him.

"In the arena, if blood is spilled —particularly *my* blood—it means I've *failed*. But here it means I *succeeded*. I successfully beat Bosley. I don't think I'll ever be afraid of blood again."

"But you didn't really succeed, you know," Sarah said helpfully. "You gave in to your animal instincts, instead of conquering them. You shook this whole craft with your brute force."

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Yes, he thought, it had seemed as if the world had shook with the thunder of his blows. It had been invigorating, satisfying. But there was something else here, his mind told him. He felt alive, and he wanted to live.

"Driver," he called. *"Driver!"*

A dozen helpful hands held Smith down as the driver was fetched and Bosley cowered back in his seat.

"Now what is this all about, Mr. Smith," the driver asked with strained patience.

"Driver, I've got a way to save all of our lives," Smith said.

"May I remind you, Mr. Smith, that is my job, not yours."

"But *I* can actually do it!"

"Smith, I'm only human. How much backtalk do you expect me to take from you?"

"Listen to me, will you?" Smith pleaded. "Didn't you notice how the craft rocked while I was fighting Bosley. That's just what we need to save us."

"Oh? You want to have another round with Bosley, do you?"

"No. I mean that even though we don't have weight, we have mass and inertia," Smith said. "What happens when an automobile stalls off a powered road? You *push.* True, you generally get *out* and push, but we can all push *from inside,* by throwing our mass against the backs of the seats and developing enough inertia to move us."

"We can hardly 'push' this craft four thousand miles," the pilot said hesitantly.

"We won't have to," Smith went on. "If we push the craft it will begin moving. Left to itself it will only go so high and then fall back to the center, but with the rocket coming behind us, we will be helped by the shock wave of air that preceeds it. If we are motionless that shock wave will not be able to overcome our inertia and we will crash. If we are already moving, then some of the inertia will already have been overcome and the shock wave will move us along a little faster. The air between will serve as an effective cushion and the second rocket will approach more and more slowly as we move along faster and faster. It will push us, if you like. It will push us four thousand miles."

The driver nodded. "Yes, I recall reading something like that in THE INTELLIGENT MAN's GUIDE TO SCIENCE years ago. But there are many variables. If we don't manage enough speed, if the ship comes to peak-height with our pushing and begins to fall back as the next rocket comes along—"

"Then we are dead, but no deader than we would be if we did nothing."

"It's worth trying," the driver said. "This will probably cost me my job if it does work—my Individual Initiative index is danger-

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ously high as it is, but damn it, I'd rather be unemployed than dead."

They tried it.

Two hundred and three human beings threw themselves against the solid backs of the contour seats in front of them, until with each lunge, the ship inched forward, lunge by inch, inch by lunge.

Bosley added his pennyweight to the effort by beating against the back of the chair in front of him with both fists, and screaming, "Let me out, let me out! I'll be *good*. I won't do it *again*."

And the craft was moving smoothly, falling upward with its speed squaring by the second.

Smith leaned back confidently. He looked at Sarah. He was feeling so invigorated that he decided her nose was not really too small after all.

"You'll lose your inheritance," she said comfortingly.

"I'm not so sure. I think we will be within the city limits of Capetown by midnight, and I will have a lot of witnesses to prove it. But if I do, I'm sure now that I can bear up under the loss."

"You have achieved self-mastery," Sarah said. "Now no matter how hungry, cold, starved and miserable you are, you will always be happy."

"Yes," he said casually.

"You see, you were wrong about something terrible happening to you if you descended into the depths. It is only thinking that makes a thing so."

"Yes," Smith said. "Will you step into the alcove with me? I have something to tell you."

They left their seats and enjoyed the luxury of walking.

Smith and Sarah walked into the privacy alcove between the restrooms where many a young man took a girl to steal a kiss or a bracelet.

"Sarah," he intoned deeply, "you don't know what a *satisfying* experience that was for me back there, how it let me conquer all my fears and anxieties about my work, my life, even this trip."

"You have achieved self-mastery," Sarah said, her breath sweet on his cheeks. "Now no matter how hungry, cold, starved and miserable you are, you will always be happy."

"Yes," he said. "I do have that to look forward to."

"And," she went on, "Now you recognize blood to be the stream of life that it is, and never again need you fear the spilling of it."

Smith gazed at the gentle beauty of Sarah's profile, a schematic diagram of youth and innocence.

"Miss Applewhite—Sarah," he said with deep feeling, "Will you marry me?"

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Through Time And Space With Ferdinand Feghoot: LVII

The intelligent amphibious Eels of Proxima Centauri XIII were found by Ferdinand Feghoot during the Space Race—to the annoyance of the Russians, whose expedition showed up only after the Eels had learned English and were trading away with the West.

The Eels were ruled by Great Mother Eel, and their well-being depended on how happy she was. Singing, dancing, telling tales, they all did their best to amuse her. The Russians, seeing this, decided to bore from within. Their agents were disguised as encyclopedia salesmen, progressive educators, and TV comedians—and were almost as boring. Before long, Mother Eel became tired and fidgety and unpleasant. Soon there was social unrest everywhere.

Feghoot returned swiftly from Earth. He brought a book full of funny old jokes, all based on the quaint speech of Irishmen, Southerners, Swedes, and whatever. Mother Eel had never heard anything like them before. Making him read them over and over again, she laughed till she quivered. She really was tickled. Her subjects rejoiced; perfect harmony was restored.

The Russian commander was furious. His patrols kidnapped Feghoot in space. "Exploiter of class-conscious Eels!" he bellowed. "You have spoiled my wonderful boring! Maybe soon I am liquidated!"

"But, Comrade," protested Ferdinand Feghoot. "Have I not converted them to *Dialect-Tickle-Mater-Eel*-ism?"

—GRENDEL BRIARTON (*with thanks to Mrs. Jules J. Perot*)

HUGO WINNERS

The HUGO award, Science Fiction's equivalent of the EMMY, EDGAR, and OSCAR awards, is given each year at the World Science Fiction Convention. HUGO winners this year include: NOVEL—Robert A. Heinlein, for *Stranger In A Strange Land;* SHORT FICTION—Brian Aldiss, for *The "Hothouse" Series;* DRAMATIC PRESENTATION—Rod Serling, CBS TV, for *The Twilight Zone;* PROFESSIONAL MAGAZINE—*Analog,* John W. Campbell, Editor; AMATEUR MAGAZINE—*Warhoon,* Richard Bergeron, Editor.

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Russell Kirk, whose Sorworth Place *we published last month, the author of such politically-oriented books as* Academic Freedom *and* A Program For Conservatives, *said to be the only living American to hold a Doctorate of Letters from St. Andrews University in Scotland, is a bachelor, and lives (says* TIME *magazine) in a "high, narrow Victorian house in Mecosta, Mich. (pop. 300) . . . with an unmarried great-aunt, [and] spends much of his time studying the family ghosts, whose personalities he claims to be able to distinguish . . ." Mr. Kirk has observed in his stories traces of the Jameses—M. R., Henry, and Jesse. We observe, also, traces of Hamlin Garland who wrote, over two generations ago,* Main-Traveled Roads*—stories of an Upper Midwest rurality which was even then falling into desuetude and poverty; of Sherwood Anderson, Erskine Caldwell, and William Faulkner. "There are people who don't fit in anywhere," said Postmaster Matt Heddle. "The Gholsons are like that." And Cribben, small martinet of a petty bureaucrat, replied, "They come under the law, same as anybody else." Undoubtedly. The question is: which law?*

BEHIND THE STUMPS

by Russell Kirk

"And Satan stood up against Israel,
and provoked David to number Israel."

POTTAWATTOMIE COUNTY, shorn of its protecting forest seventy years ago, ever since has sprawled like Samson undone by Delilah, naked, impotent, grudgingly servile. Amid the fields of rotted stumps potatoes and beans grow, and half the inhabited houses still are log cabins thrown up by the lumbermen who fol-

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lowed the trappers into this land. In Pottawattomie there has been no money worth mentioning since the timber was cut; but here and there people cling to the straggling farms, or make shift in the crumbling villages.

An elusive beauty drifts over this country sprinkled with little lakes, stretches of second-growth woods and cedar swamps, gravelly upland ridges that are gnawed by every rain, now that their cover is gone. As if a curse had been pronounced upon these folk and their houses and their crops in reprisal for their violation of nature, everything in Pottawattomie is melting away.

Of the people who stick obstinately to this stump-country, some are grandchildren and great-grandchildren of the men who swept off the forest; others are flotsam cast upon these sandy miles from the torrent of modern life, thrown out of the eddy upon the soggy bank to lie inert and ignored. Worn farmers of a conservative cast of mind, pinched, tenacious, inured to monotony, fond of the bottle on Saturday nights; eccentrics of several sorts; a silent half-breed crew of Negro-and-Indian, dispersed in cabins and sun-stricken tar-paper shanties along the back roads, remote from the county seat and the lesser hamlets that conduct the languid commerce of Pottawattomie—these are the Pottawattomie people. Decent roads have come only lately; even television is too costly for many of these folk; the very hand of government is nerveless in this poverty of soil and spirit.

Yet not wholly palsied, the grip of the State, for all that. Tax assessments necessarily are modest in Pottawattomie, but there are highways to be maintained, poaching of deer and trout to be repressed, old age relief to be doled out. There exists a sheriff, intimate with the local tone, at the county seat; also a judge of probate; and the county supervisors are farmers and tradesmen without inclination to alter the nature of things in Pottawattomie. So far, government is a shadow of a shade. But now and again the State administration and the Federal administration gingerly poke about in the mud and brush of the stump-land.

A special rural census had to be compiled. Down in the capital, a plan had been drawn up concerning commodity price-levels and potential crop yields and tabulated prices. Acres of corn were to be counted, and pigs and people. Enumerators went out to every spreading wheat farm, to every five-acre tomato patch; and Pottawattomie County was not forgotten.

Always against the government, Pottawattomie; against the administration that ordained this special census, most vehemently.

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This new survey, Pottawattomie declared, meant more blank forms, more trips to the county seat, higher taxation, and intolerable prying into every man's household—which last none resent more than do the rural-poor.

So the Regional Office of the Special Census began to encounter difficulties in Pottawattomie. Doors were shut in the faces of certified enumerators, despite threats of warrants and writs; the evasive response was common, violent reaction not inconceivable. Reports particularly unsettling were received from the district of Bear City, a decayed village of two hundred inhabitants. Despite his pressing need for the stipend attached to the office, the temporary agent there resigned in distress at a growing unpopularity. A woman who took his place was ignored by half the farmers she endeavored to interview.

Put out, the Regional Office dispatched to Bear City a Special Interviewer: Cribben. They let him have a car and a stack of forms and rather a stiff letter of introduction to the postmaster in that town, and off he drove northward.

Being that sort of man, Cribben took his revolver with him. Once he had been a bank messenger, and he often told his associates, "The other messengers carried their guns at the bottom of their brief cases, so there'd be no chance of having to pull them if there was a stick-up. But I kept my .38 handy. I was willing to have it out with the boys."

Tall, forty, stiff as a stick, this Cribben—walking with chin up, chest out, joints rigid, in a sort of nervous defiance of humanity. He looked insufferable. He was insufferable. Next to a jocular man, an insufferable man is best suited for the responsibilities that are a Special Interviewer's. Close-clipped black hair set off a strong head, well proportioned; but the mouth was petulant, and the eyes were ignorantly challenging, and the chin was set in lines of pomposity. In conversation, Cribben had a way of sucking in his cheeks with an affectation of whimsical deliberation, for Cribben had long told himself that he was admirably funny when he chose to be, especially with women. Years before, his wife had divorced him—in Reno, since (somewhat to her bewilderment) she had been able to think of no precise ground which would admit of obtaining a divorce in their own state. He lived chastely, honestly, soberly, quite solitary. He laughed dutifully at other men's jokes; he would go out of his way to write a friendly letter of recommendation; but somehow no one ever asked him out or looked him up. A failure in everything was Cribben—ex-engineer, ex-chief clerk, ex-artillery captain, ex-foundry

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partner. He told himself he had been completely reliable in every little particular, which was true; and he told himself he had failed because of his immaculate honesty in a mob of rogues, which was false. He had failed because he was precise.

"Corporal, about the morning report: I see you used eraser to clean up this ink blot, instead of correction fluid. Watch that, Corporal. We'll use correction fluid. Understand?" This is the sort of thing the precise Cribben would say—if with a smile, then the wrong kind of smile; and he would compliment himself on his urbanity.

Cribben did not spare himself; no man ever was more methodical, more painstaking. Reliable in every little particular, yes; but so devoted to these particulars that generalities went to pot. Subordinates resigned and read the "help wanted" columns rather than submit to another week of such accuracy; superiors found him hopelessly behind in his work, austerely plodding through tidy inconsequentialities. Truly, Cribben was intolerable. He knew the mass of men to be consistently inaccurate and often dishonest. Quite right, of course. Sensible men nod and shrug; Cribben nagged. His foundry went to pieces because he fretted about missing wrenches and screwdrivers. He thought his workmen stole them. They did; but Cribben never would confess that moderate pilferage was an item of fixed overhead. In Cribben's pertinacity there would have been something noble, had he loved precision for the sake of truth. But he regarded truth only as an attribute of precision.

So down to that sink of broken men, petty governmental service, spun Cribben in the vortex of failure. Having arrived at the abyss, which in this instance was a temporary junior clerkship, Cribben commenced to rise in a small way. In this humorless precision the assistant chief of the Regional Office discerned the very incarnation of the second-best type of public functionary, and so set him to compelling the reluctant to complete interminable forms. Cribben became a Special Investigator, with every increase of salary authorized by statute. To entrust him with suvervisory duties proved inadvisable; yet within his sphere. Cribben was incomparable. It was Cribben's apotheosis. Never had he liked work so well, and only a passion to reorganize the Regional Office upon a more precise model clouded his contentment. With the majesty of Government at his back, the hauteur of a censor in his mien as he queried the subject of a survey or interrogated the petitioner for a grant—Cribben never dreamed of more than this. For Cribben was quite devoid of imagination.

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And Cribben drove north to Bear City.

False-fronted dry goods shops and grocery stores and saloons, built lavishly of second-grade white pine when pine was cheap and seemingly inexhaustible, are strung along a broad gravelled road: this is Bear City. They are like discolored teeth in an old man's mouth, these buildings, for they stand between grass-grown gaps where casual flames have had their way with abandoned structures. One of these shops, with the usual high, old-fashioned windows and siding a watery white, is also the post office. On Saturday afternoons in little places like this, post offices generally close. But on this Saturday afternoon, in Bear City—so Cribben noted as he parked his automobile—not only the dry goods half of the shop, but the post office too was open for business. This was tidy and efficient, Cribben reflected, striding through the door. It predisposed him to amiability.

"Afternoon," said Cribben to the postmaster, "I'm J. K. Cribben, from the Regional Office. Read this, please." He presented his letter of introduction.

Mr. Matt Heddle, Postmaster, Bear City, was behind the wrought-iron grill of the old post office counter, a relic of earlier days and more southerly towns; and his shy wife Jessie was opposite, at the shop counter. They were not lacking in a dignity that comes from honorable posts long held in small places. Mr. Heddle, with his crown of thick white hair and his august slouch, his good black suit, and his deep slow voice, made a rural postmaster for one to be proud of.

"Why, I wish you luck, Mr. Cribben," Matt Heddle said with concern, reading the letter of introduction. Mr. Heddle desired to be postmaster for the rest of his life. "I'll do anything I can. I'm sorry about the fuss the other census man had."

"His own damned fault," Cribben said, largely. "Don't give a grouch a chance to make a fuss—that's my way. Take none of their lip. I've handled people quite awhile. Shoot out your questions, stare 'em down. I won't have much trouble here."

He didn't. Whatever Cribben's shortcomings, he was neither coward nor laggard. Only six or seven hours a day he spent in the tourist room he had rented; and by the time six days had passed, he had seen and conquered almost all the obdurate farmers around Bear City. Their sheds and their silos, their sheep and their steers, their hired men and their bashful daughters, the rooms in their houses and the privies behind them—all were properly observed and recorded in forms and checksheets. What Cribben could not see with his own eyes he bullied

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out adequately enough from the uneasy men he cornered and glowered upon. He was big, he was gruff, he was pedantically insistent. He was worth what salary the Regional Office paid. He never took "no" for an answer—or "don't know," either. He made himself detested in Bear City more quickly than ever had man before; and he paid back his contemners in a condescending scorn.

His success was the product, in part, of his comparative restraint: for he seemed to those he confronted to be holding himself precariously in check, on the verge of tumbling into some tremendous passion, like a dizzy man teetering on a log across a stream in spate. He was cruelly cold, always—never fierce, and yet hanging by a worn rope. What brute would have had the callousness, or the temerity, to thrust this man over the brink? It was safer to answer his questions and endure his prying.

Over the rutted trails of Pottawattomie County in muddy spring he drove his official automobile, finding out every shack and hut, every Indian squatter, every forlorn old couple back in the cedar thickets, every widow who boasted a cow and a chicken run. They were numbered, all numbered. This spring the birds were thick in Pottawattomie and some of the lilacs bloomed early, but Cribben never looked at them, for they were not to be enumerated. He had not an ounce of fancy in him. Six days of this and he had done the job except for the Barrens. Of all Pottawattomie, Bear City district was the toughest nut for the Special Census, and the Barrens were the hard kernel of Bear City's hinterland.

Who lives in the Barrens, that sterile and gullied and scrub-veiled upland? Why, it's hard to say. A half-dozen scrawny families, perhaps more—folk seldom seen, more seldom heard, even in Bear City. They have no money for the dissipations of a town, the Barrens people—none of them, at least, except the Gholsons; and no one ever knew a Gholson to take a dollar out of his greasy old purse for anything but a sack of sugar or a bottle of rot-gut whisky. The Gholsons must have money, as money goes in Pottawattomie, but it sticks to them.

On Saturday afternoon, a week after his arrival in town, Cribben entered the post office, self-satisfied and muddy. Matt Heddle was there, and Love the garage-man—Love already lively from morning libations. "Started on the Barrens this morning, Heddle," Cribben said ponderously. "Easy as falling off a log. Covered the Robinson place, and Hendry's. Eight kids at the Robinsons', dirty as worms." He looked at his map. "Tomorrow, now, I begin with this place called Barrens Mill. Not much of a road into it. It's right on Owens

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Creek. What d'you know about Barrens Mill, Heddle?" He pointed, his heavy forefinger stiff, at a spot on his map.

Mr. Matt Heddle was a good-natured old man, but he did not like Cribben. Pottawattomie people said that Mr. Heddle was well read, which in Pottawattomie County means that a man has three reprints of Marie Corelli's novels and two of Hall Caine's, but they were not far wrong in Heddle's case. The appetite for knowledge clutched at him as it sometimes does at pathetic men past their prime, and his devotion to the better nineteenth century novelists, combining with some natural penetration, had made him shrewd enough. His good nature being unquenchacle, he looked at grim Cribben and thought he read in that intolerant face a waste of loneliness and doubt that Cribben never could confess to himself, for terror of the desolation.

He looked at Cribben, and told him: "Let it go, Mr. Cribben. They're an ignorant bunch, the Ghoslons; they own Barrens Mill. Let it go. It'll be knee-deep in mud up there. Look up the acreage in the county office, and the assessment, and let it go at that. You've done all the work anybody could ask."

"We don't let things go in the Regional Office," Cribben said, with austerity. "I've already looked in the county book: five hundred and twenty acres the Gholsons own. But I want to know *what* Gholson."

Matt Heddle started to speak, hesitated, looked speculatively at Cribben, and then said, "It's Will Gholson that pays the taxes."

Love, who had been leaning against the counter, a wise grin on his face, gave a whisky chuckle and remarked, abruptly: "She was a witch and a bitch, a bitch and a witch. Ha! Goin' to put *her* in the census?"

"Dave Love, this isn't the Elite; it's the post office," Mr. Heddle said, civilly. "Let's keep it decent in here."

"Yes, Will Gholson pays the taxes," Cribben nodded, "but the land's not in his name. The tax-roll reads 'Mrs. Gholson'—just that. No Christian name. How do you choose your county clerk?"

"Mrs. Gholson, old Bitch Gholson, old Witch Gholson," chanted Love. "You goin' to put *her* in the census? She's dead as a dodo."

"Will Gholson's mother, maybe, or his grandmother—that's who's meant," Heddle murmured. "Nobody really knows the Gholsons. They aren't folks you get to know. They're an ignorant bunch, good to keep clear of. She was old, old. I saw her laid out. Some of us went up there for the funeral—only time we ever went inside the house. It was only decent to go up."

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"Decent, hell!" said Love. "We was scared not to go, that's the truth of it. Nobody with any brains rubs the Gholsons the wrong way."

"Scared?" Cribben sneered down at Love.

"God, yes, man. She was a damned witch, and the whole family's bats in the belfry. Old Mrs. Gholson have a Christian name? Hell, whoever heard of a witch with a Christian name?"

"You start your drinking too early in the day," Cribben said. Love snorted, grinned, and fiddled with a post-office pen. "What kind of a county clerk do you have, Heddle, that doesn't take a dead woman's name off the books?"

"Why, I suppose maybe the Gholsons wanted it left on," Heddel sighed, placatingly. "And there was talk. Nobody wants to fuss with the Gholsons. Sleeping dogs, Mr. Cribben."

"If you really want to know," Love growled, "she cursed the cows, for one thing. The cows of people she didn't care for, and the neighbors that were too close. The Gholsons don't like close neighbors."

"What are you giving me?" Cribben went menacingly red at the idea of being made the butt of a joke: this was the one thing his humorless valor feared.

"You don't have to believe it, man, but the cows went dry, all the same. And sometimes they died. And if that wasn't enough, the Gholsons moved the fences, and the boundary-markers. They took over. They got land now that used to be four or five farms."

Mrs. Heddle, having been listening, now came across the shop to say in her shy voice, "They did move the posts, Mr. Cribben—the Ghoslons. And the neighbors didn't move them back. They were frightened silly."

"It'll take more than a sick cow to scare me, Mrs. Heddle," Cribben told her, the flush fading from his cheeks. "You people don't have any system up here. What's wrong with your schools, that people swallow this stuff? How do you hire your teachers?"

"Barrens Mill is a place to put a chill into a preacher, Mr. Cribben," said Matt Heddle, meditatively. "There's a look to it . . . the mill itself is gone, but the big old house is there, seedy now, and the rest of the buildings. John Wendover, the lumberman, built it when this country was opened up, but the Gholsons bought it after the timber went. Some people say the Gholsons came from Missouri. I don't know. There's stories . . . Nobody knows t Gholsons. They've another fa down the creek. There's five G son men, nowadays, but I know how many women. Gholson does the talking for and he talks as much as a

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"He'll talk to me," Cribben declared.

Over Matt Heddle came a sensation of pity. Leaning across the counter, he put his hand on Cribben's. Few ever had done this, and Cribben, startled, stepped back. "Now, listen, Mr. Cribben, friend. You're a man with spunk, and you know your business; but I'm old, and I've been hereabouts a while. There are people that don't fit in anywhere, Mr. Cribben. Did you ever think about that? I mean, they won't live by your ways and mine. Some of them are too good, and some are too bad. Everybody's growing pretty much alike—nearly everybody—in this age, and the one's that don't fit in are scarce; but they're still around. Some are queer, very queer. We can't just count them like so many four-cent stamps. We can't change them, not soon. But they're shy, most of them: let them alone, and they're likely to crawl into holes, out of the sun. Let them be; they don't signify, if you don't stir them up. The Gholsons are like that."

"They come under the law, same as anybody else," Cribben put in.

"Oh, the law was made for you and me and the folks we know—not for them, any more than it was made for snakes. So long as they let the law alone, don't meddle, Mr. Cribben, don't meddle. They don't signify any more than a wasps' nest at the back of the orchard, if you don't poke them." Old Heddle was very earnest.

"A witch of a bitch and a bitch of a witch," sang Love, mordantly. "O Lord, how she hexed 'em!"

"Why, there's Will Gholson now, coming out of the Elite," Mrs. Heddle whispered from the window. A greasy, burly man with tremendous eyebrows that had tufted points was walking from the bar with a bottle in either hip-pocket. He was neither bearded nor shaven, and he was filthy. He turned toward a wagon hitched close by the post office.

"Handsome specimen," observed Cribben, chafing under all this admonition, the defiance in his lonely nature coming to a boil. "We'll have a talk." He strode into the street, Matt Heddle anxiously behind him and Love sauntering in the rear. Gholson, sensing them, swung round from tightening his horse's harness. Unquestionably he was a rough customer; but that roused Cribben's spirit.

"Will Gholson," called out Cribben in his artillery-captain voice, "I've got a few questions to ask you."

A stare; and then Gholson spat into the road. His words were labored, a heavy blur of speech, like a man wrestling with a tongue uncongenial to him. "You the counter?"

"That's right," Cribben told

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him. "Who owns your farm, Gholson?"

Another stare, longer, and a kind of slow, dismal grimace. "Go to hell," said Gholson. "Leave us be."

Something about this earth-stained, sweat-reeking figure, skulking on the frontier of humanity, sent a stir of revulsion through Cribben; and the consciousness of his inward shrinking set fire to his conceit, and he shot out one powerful arm to catch Gholson by the front of his tattered overalls. "By God, Gholson, I'm coming out to your place tomorrow; and I'm going through it; I'll have a warrant; and I'll do my duty; so watch yourself. I hear you've got a queer place at Barrens Mill, Gholson. Look out I don't get it condemned for you." Cribben was white, from fury, and shouting like a sailor, and shaking in his emotion. Even the dull lump of Gholson's face lost its apathy before this rage, and Gholson stood quiescent in the tall man's grip.

"Mr. Cribben, friend," Heddle was saying. Cribben remembered where he was, and what; he let go of Gholson's clothes; but he put his drawn face into Gholson's and repeated, "Tomorrow. I'll be out tomorrow."

"Tomorrow's Sunday," was all Gholson answered.

"I'll be there tomorrow."

"Sunday's no day for it," said Gholson, almost plaintively. It was as if Cribben had stabbed through this hulk of flesh and rasped upon a moral sensibility.

"I'll be there," Cribben told him, in grim triumph.

Deliberately Gholson got into his wagon, took up the reins, and paused as if collecting his wits for a weighty effort. "Don't, Mister." It was a grunt. "A man that—a man that fusses on Sunday—well, he deserves what he gets." And Gholson drove off.

"What's wrong, Mr. Cribben?" asked Heddle, startled: for Cribben had slipped down upon the bench outside the post office and was sucking in his breath convulsively. "Here, a nip," said Love, in concern, thrusting a bottle at him. Cribben took a swallow of whisky, sighed, and relaxed. He drew an envelope out of a pocket and swallowed a capsule, with another mouthful of whisky.

"Heart?" asked Heddle.

"Yes," Cribben answered, as humbly as was in him. "It never was dandy. I'm not supposed to get riled."

"With that heart, you don't want to go up to Barrens Mill—no, you don't," said the postmaster, gravely.

"She's a witch, Cribben." Love was leaning over him. "Hear me, eh? I say, she *is* a witch."

"Quiet, Love," the postmaster told him. "Or if you do go to the Barrens, Mr. Cribben, you'll take

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a couple of the sheriff's boys with you."

Cribben had quite intended to ask for a deputy, but he'd be damned now if he wouldn't go alone. "I'm driving to the judge for a search warrant," he answered, his chin up. "That's all I'll take."

Heddle walked with him to the boardinghouse where Cribben kept his automobile. He said nothing all the way, but when Cribben had got behind the wheel, he leaned in the window, his big, smooth, friendly old face intent: "There's a lot of old-fashioned prejudice in Pottawattomie, Mr. Cribben. But, you know, most men run their lives on prejudice. We've got to; we're not smart enough to do anything else. There's sure to be something behind a prejudice. I don't know all about the Gholsons, but there's fact behind prejudice. Some things are best left alone."

Here Cribben rolled up his window and shook his head and started the motor and rolled off.

After all, there was no more he could have said, Matt Heddle reflected. Cribben would go to Barrens Mill, probably count everything in sight, and bullyrag Will Gholson, and come back puffed up like a turkey. Misty notions . . . He almost wished someone would put the fear of hell-fire into the Special Interviewer. But this was only an old-fangled backwater, and Cribben was a new-fangled man.

* * *

On Sunday morning, Cribben drove alone up the road toward the Barrens. In his pockets were a set of forms, and a warrant in case of need; Cribben left his gun at home, thinking the devil of a temper within him a greater hazard than any he was liable to encounter from the Gholsons. Past abandoned cabins and frame houses with their roofs fallen in, past a sluggish stream clogged with ancient logs, past mile on mile of straggling second-growth woodland, Cribben rode. It was empty country, not one-third so populous as it had been fifty years before, and he passed no one at this hour.

Here in the region of the Barrens, fence wire was unknown: enormous stumps, uprooted from the fields and dragged to the roadside, are crowded one against another to keep the cows out, their truncated roots pointing toward the empty sky. Most symbolic of the stump-country, jagged and dead, these fences; but Cribben had no time for myth. By ten o'clock he was nursing his car over the remnant of a corduroy road which twists through Long Swamp; the stagnant water was a foot deep upon it, this spring. But he went through without mishap, only to find himself a little later snared in the wet ground be-

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tween two treacherous sand hills. There was no traction for his rear wheels; maddened, he made them spin until he had sunk his car to the axle; and then, cooling, he went forward on foot. Love's Garage could pull out the automobile later; he would have to walk back to town, or find a telephone somewhere, when he was through with this business. He had promised to be at Barrens Mill that morning, and he would be there. Already he was within a mile of the farm.

The damp track that once had been a lumber road could have led him, albeit circuitously, to the Gholsons. But, consulting his map, Cribben saw that by walking through a stretch of hardwoods he could—with luck—save fifteen minutes' tramping. So up a gradual ascent he went, passing on his right the wreck of a little farmhouse with high gables, not many years derelict. "The Gholsons don't like close neighbors." Oaks and maples and beeches, this wood, with soggy leaves of many autumns underfoot and sponge-mushrooms springing up from them, clammily white. Water from the trees dripped upon Cribben, streaking his short coat. It was a quiet wood, most quiet; the dying vestige of a path led through it.

Terminating upon the crest of a ridge, the path took him to a stump fence of grand proportions. Beyond was pasture, cleared with a thoroughness exceptional in this country; and beyond the pasture, the ground fell away to a swift creek, and then rose again to a sharp knoll, of which the shoulder faced him; and upon the knoll was the house of Barrens Mill.

All round the house stretched the Gholsons' fields, the work of years of fantastic labor. What power had driven these dull men to such feats of agricultural vainglory? For it was a beautiful farm: every dangerous slope affectionately buttressed and contoured to guard it from the rains, every boulder hauled away to a pile at the bend of the stream, every potential weed-jungle rooted out. The great square house—always severely simple, now gaunt in its blackened boards from which paint had scaled away long since—surveyed the whole rolling farm. A low wing, doubtless containing kitchen and woodshed, was joined to the northern face of the old building, which seemed indefinably mutilated. Then Cribben realized how the house had been injured: it was nearly blind. Every window above the ground-floor had been neatly boarded up—not covered over merely, but the frames taken out and planks fitted to fill the apertures. It was as if the house had fallen prisoner to the Gholsons, and sat Samson-like in bound and blindfolded shame.

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All this was apprehended at a single glance; a second look disclosed nothing living in all the prospect—not even a dog, not even a cow. But one of the pallid stumps stirred.

Cribben started. No, not a stump: someone crouching by the stump fence, leaning upon a broken root, and watching, not him, but the house. It was a girl, barefoot, a few yards away, dressed in printed meal-sacks, fifteen or sixteen years old, and thoroughly ugly, her hair a rat's-nest; this was no country where a wild rose might bloom. She had not heard him. For all his ungainly ways, Cribben had spent a good deal of time in the open, and could be meticulously quiet. He stole close up to the girl and said, in a tone he meant to be affable, "Well, now?"

Ah, what a scream out of her! She had been watching the blind façade of Barrens Mill house with such a degree of intensity, a kind of cringing smirk on her lips, that Cribben's words must have come like the voice from the burning bush; and she whirled, and shrieked, all sense gone out of her face, until she began to understand that it was only a stranger by her. Though Cribben was not a feeling man, this extremity of fright touched him almost with compassion, and he took the girl gently by the shoulder, saying, "It's all right. Will you take me to the house?" He made as if to lead her down the slope.

At that, the tide of fright poured back into her heavy Gholson face, and she fought in his grasp and swore at him. Cribben —a vein of prudery ran through his nature—was badly shocked: it was hysterically vile cursing, nearly inarticulate, but compounded of every ancient rural obscenity. And she was very young. She pulled away and dodged into the dense wood.

Nothing moved in these broad fields. No smoke rose from the kitchen, no chickens cackled in the yard. Overhead a crow flapped, as much an alien as Cribben himself; nothing more seemed to live about Barrens Mill. Were Will Gholson crazy enough to be peering from one of the windows with a shotgun beside him, Cribben would make a target impossible to miss, and Cribben knew this. But no movement came from behind the blinds, and Cribben went round unscathed to the kitchen door.

A pause and a glance told Cribben that the animals were gone, every one of them, to the last hen and the last cat. Driven down to the lower farm to vex and delay him? And it looked as if every Gholson had gone with them. He knocked at the scarred back door: only echoes. It was not locked; and, having his warrant in his pocket, he entered. If Will Ghol-

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son were keeping mum inside, he'd rout him out.

Four low rooms—kitchen, rough parlor, a couple of topsy-turvy bedrooms—this was the wing of the house, showing every sign of a hasty flight. A massive panelled door shut off the parlor from the square bulk of the older house, and its big key was in the lock. Well, it was worth a try. Cribben, unlocking the door, looked in: black, frayed blinds drawn down over the windows—and the windows upstairs boarded, of course. Returning to the kitchen, he got a kerosene lamp, lit it, and went back to the darkened rooms.

Fourteen-foot ceilings in these cold chambers; and the remnants of Victorian prosperity in mildewed love seats and peeling gilt mirrors; and dust, dust. A damp place, wholly still. Cribben, telling his nerves to behave, plodded up the fine sweep of the solid stairs, the white plaster of the wall gleaming from his lamp. Dust, dust.

A broad corridor, and three rooms of moderate size, their doors ajar, a naked bedstead in each; and at the head of the corridor, a door that stuck. The stillness infecting him, Cribben pressed his weight cautiously upon the knob, so that the squeak of the hinges was light when the door yielded. Holding the lamp above his head, he was in.

Marble-topped commode, washbowl holding a powder of grime, fantastic oaken wardrobe—and a tremendous Victorian rosewood bed, carven and scrolled, its towering head casting a shadow upon the sheets that covered the mattress. There *were* sheets; and they were humped with the shape of someone snuggled under them.

"Come on out," said Cribben, his throat dry. No one answered, and he ripped the covers back. He had a half-second to stare before he dropped the lamp to its ruin.

Old, old—how old? She had been immensely fat, he could tell in that frozen moment, but now the malign wrinkles hung in horrid empty folds. How evil! And even yet, that drooping lip of command, that projecting jaw—he knew at last from what source had come the power that terraced and tended Barrens Mill. The eyelids were drawn down. For this only was there time before the lamp smashed. Ah, why hadn't they buried her? For she was dead, long dead, many a season dead.

All light gone, Cribben stood rigid, his fingers pressed distractedly against his thighs. To his brain, absurdly, came a forgotten picture out of his childhood, a colored print in his *King Arthur*: "Launcelot in the Chapel of the Dead Wizard," with the knight lifting the corner of a shroud.

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This picture dropping away, Cribben told his unmoving self, silently but again and again, "Old Mrs. Gholson, old witch, old bitch," as if it were an incantation. Then he groped for the vanished door, but stumbled upon the wire guard of the broken lamp.

In blackness one's equilibrium trickles away, and Cribben felt his balance going, and knew to his horror that he was falling straight across that bed. He struck the sheets heavily and paused there in a paralysis of revulsion. Then it came to him that no one lay beneath him.

Revulsion was swallowed in a compelling urgency, and Cribben slid his hands sweepingly along the covers, in desperate hope of a mistake. But no. There was no form in the bed but his own. Crouching like a great clumsy dog, he hunched against the headboard, while he blinked for any filtered drop of light, show him what it would.

He had left the door ajar, and through the doorway wavered the very dimmest of dim glows, the forlorn hope of the bright sun without. Now that Cribben's eyes had been a little time in the room, he could discern whatever was silhouetted against the doorway —the back of a chair, the edge of the door itself, the knob. And something *moved* into silhouette: imperious nose, pendulous lip, great jaw. So much, before Cribben's heart made its last leaping protest.

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Our ace agent, Mr. Pettifogle (according to his report, which we would not dream of doubting), had paused only briefly in his task of attempting to secure information about Dr. Felix Martí-Ibáñez in the latter's country of Brazil, and was seated at a sidewalk cafe in Bahía, with a large coffee and a small brandy in front of him, when a beautiful young woman, who appeared to be having difficulty with her garter, stopped by his table. At this point in his narrative Pettifogle seems rather confused, is not quite certain what happened later, but believes the young woman to have been in the pay of a foreign power or another magazine: he holds no resentment, however. "She was young," he writes, "and very beautiful. All *women in Brazil are very beautiful, and so is the coffee and the brandy." We believe it. We expect to have data on Dr Martí-Ibáñez by the time we publish his next excellent story. Meanwhile we urge you not to wait, but to read now this delightful and enchanting item, another F&SF discovery from the great continent to the south.*

SENHOR ZUMBEIRA'S LEG

by Felix Marti-Ibanez

IF YOU LOOK AT A MAP OF Brazil—get a really good one—you will notice that some fifty miles to the south of Sao Paulo there is a little town called Zumbeira. On paper, it is only a mere black dot between the blue of the ocean and the green of the land; but any well-informed person knows that the town of Zumbeira is famous the world over for its artificial-leg industry and that it bears the name of the manufacturer, a man of great vision and noble heart who turned this humble artifact into a veritable miracle of scientific orthopedy. From every point of our planet people deprived by fate of one or both legs flock to Zumbeira, certain of

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finding the longed-for limb to replace—sometimes it even outdoes—the missing original. There is no size, color or shape of leg that cannot be found in Zumbeira. The official sample line they show the purchaser is dazzling. Only when he sees it in person does the applicant fully realize how right Oscar Wilde was when he affirmed that art excels nature.

The founder and reigning proprietor of the aforementioned industry and town is Senhor Dom Armando Luis Adolfo Silveiro Zumbeira, and the episode in his life that laid the foundation of his great fortune is the burden of our story. We hasten to add that the events may be well known to you or even commonplace, but we know that tales of everyday life hold a great fascination for the man in the street, and therefore, at the risk of repeating ourselves or even boring you, we shall go on with our story.

Some years ago Dom Luis Zumbeira had two major problems: a missing leg and a profligate son. The lack of the former and the excesses of the latter were constant sources of grief and worry to the noble old man. In his late sixties but still with a firm grip on life—he reminds us of a pine tree in the black earth of a primeval forest—Senhor Zumbeira was a stalwart little man blessed with one enviable though by no means rare quality: he so successfully blended into his surroundings that he always passed unnoticed. His face was rather overcrowded: his eyebrows were like mustaches and his mustache like an eyebrow, and horn-rimmed glasses, warts, long sideburns, a Van Dyke beard, freckles and a crooked nose were all jammed together like passengers in a crowded train. To compensate perhaps for this superabundance of his face, Senhor Zumbeira was minus his left leg from the middle of the thigh down.

How Senhor Zumbeira lost his leg is not pertinent to our story. The tales you hear from his fellow townspeople are as numerous and divergent as the little man's own accounts. If Senhor Zumbeira's reports of the accident adopt a rather heroic tone—duels, battles, train catastrophes—his neighbors' are a little more prosaic, running the gamut from an infected corn to slow erosion from playing the foot pedal of the slot machine at his club.

Senhor Zumbeira was a widower and had a nice little income which spared him the necessity of working for a living. His life, in short, was quiet and peaceful. He lived in the outskirts of the town in a small house with a little garden in which there blossomed many fragrant flowers. A white road bordered by coffee trees led to more populous districts. At the foot of an adjacent

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hill, a lovely little bay with lazy blue waters reflected the sun as the blue eyes of a woman reflect candlelight. The air, always mild and soft, blended the screams of lazy birds with the fragrant aroma of the coffee trees. Every morning, tolling bells awakened the slumbering fertile earth and shook the pale blue sky off the green pillows of the trees. Senhor Zumbeira derived great pleasure from the countryside and lived happily—except for the double worry of his offspring and his leg.

Silveiro, Senhor Zumbeira's son, a young man of twenty-five, olive-skinned, with the eyes of an Arab sheik and black hair curlier than the ripples in the bay, had inherited and raised to the nth degree his father's weakness for the weaker sex and his Olympic disdain for any labor of any kind. Educated in his father's private school of aesthetics, young Silveiro never said no to any offer of love or yes to any offer of work. Faithful propagator of the paternal creed, Silveiro would turn as pale over a well-turned female ankle as over the prospect of wasting his life in boring toil. Let it not be said, however, that he did not try for at least one whole week to achieve success as a tester in a bed and rocking chair factory. But he failed utterly and miserably, whereupon he promptly swore never again to weaken and soil his fingers with toil. Thereafter, following his father's footsteps closely, and even eclipsing him, he dedicated himself to the worship of feminine beauty of all shapes, colors, ages and sizes.

His son's philandering propensities were not, we have said, the only cross Senhor Zumbeira had to bear; he also was in desperate need of an artificial leg. The first one he had, fashioned of wood by his friend, the locksmith, an "expert" at all sorts of things, was consumed in flames one evening when, meditating on the amount of solar gold imprisoned in a bottle of Fundador Cognac, he fell asleep a little too close to the fire. The second leg, devised by the same expert from synthetic rubber of his own vintage, disintegrated in a way that still puzzles several scientists acquainted with the case. On his way to the club one day, Senhor Zumbeira, wearing his new limb and deep in thought about the curves of a lady who had just moved into town, suddenly felt that something was definitely wrong. When he reached his club and went to hang his hat, he observed with great surprise that he could not reach the hat rack but concluded that it had been moved higher up. He soon saw his deduction shattered to nought. For when he passed a mirror, he saw with horror that his left shoulder was several inches lower than the right.

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A friend, however, promptly set his mind at rest. The sun, he suggested, had melted part of the leg. The leg shrank at such speed that Senhor Zumbeira was tormented all the way home by visions of himself crawling like a wretched bug through the dirt and dust of the road. When he finally reached his home and unscrewed his leg, it was the size of a pocket pencil. You can still see this unique curiosity at the museum in Senhor Zumbeira's offices.

It took him a long time to make up his mind and, above all, to muster enough courage, but Senhor Zumbeira was a scientific-minded man who would never leave any avenue of hope unexplored.

One day he called his son and explained his new approach to the problem of his missing leg.

"Son," he said casually, "I want you to run an errand for me."

"I shall be delighted, papa," replied the devoted son. "Are there any women involved?" he added hopefully.

"You ought to be ashamed! Is that all you think about?"

"Is there anything else to think about?" answered his son with perfect logic and in a hurt tone. "But then, I was only asking."

"Well, no, no women are involved, that is, I do not know. I want you to go to a sorceress who has been highly recommended to me. She is the best south of the Rio Bravo. She can heal, mend, patch and rehabilitate anything and everything. I want you to go, as to go myself would demean my dignity, and buy a charm that will restore my missing leg."

"Papa, papa, how can you believe in such things?"

"Silveiro, my son, you are as ignorant as you are lascivious."

"In the first defect I only resemble myself, in the second quality I take after my father," replied Silveiro, who could toss a compliment in the same manner a bride tosses her bridal bouquet: knowing that somebody will always pick it up.

"My son, sorceresses practice magic, and magic is the oldest science on earth. Long before medicine began, magic was already practiced. Six thousand years before doctors began practicing on Park Avenue, Harley street, or the Rua das Saudades in Rio, shamans and witch doctors practiced their trade most successfully. Pray, do not scorn the powers of darkness. A talisman has more power than an antibiotic, and a fetish can do more harm than a poison."

Silveiro's visit to the town's sorceress was short, sharp and sterile.

The magic-woman lived in a hut outside the town. Scrawny, skinny chickens and squalid but proud and aggressive pigs care-

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fully investigated the ground outside the hut; inside there were embalmed weirds animals, pots and flasks filled with pestiferous ominous-looking herbs, plus all the paraphernalia of the professional sorceress.

Silveiro explained his commission rather briefly, as the odors around him made him feel nauseous.

The old woman had skin like the bark of a tree, thorny fingers, and eyes that brimmed with the wisdom of many millennia, but had no color at all, only a frightening Daliesque light.

"A charm to grow a leg!" she growled. "Are you jesting, my son?"

"That is what my father wants."

"Is that what *you* want?"

"I want lots of women," answered Silveiro with admirable sincerity.

"I can sell you a charm that will have maidens hanging from your neck."

"That," Silveiro pensively replied, "will make love rather an acrobatic feat. I prefer them horizontally."

"So . . . is it a deal?"

It was a struggle, but the memory of his austere father prevailed.

"No," replied Silveiro resolutely, "I want a leg for my father, not a woman for me to love."

"Well, my son—legs, loves . . . why quibble? Cross my palm with silver and I will give you a sovereign charm for both—eh?"

The bargain seemed too good to miss. Silveiro took it, and was in turn, on the way home, taken with misgivings, suspicions, doubts. His father received report of the wise woman's refusal with a philosophical shrug; and the charm stayed, unnoticed and forgotten, in Silveira's pocket.

Some days later, while using with uncommon valor a temporary leg produced by the same relentless amateur of their town, Senhor Zumbeira decided to send his son to Rio de Janeiro to purchase a reliable leg from a reliable concern. Had Silveiro been more of a psychologist, he might have wondered what in heavens could have possessed his father to send him to the big sinful city with his wallet bulging with freshly minted cruzeiros. But perhaps we should not ask the why and wherefore of godsends. Silveiro, without as much as a question mark in his big dark eyes, respectfully kissed his sire on the cheek, applied an affectionate pat to the temporary leg, and jingling the coins in his pocket with a light heart and a jaunty step left the house. Had his poor father been able to read his thoughts, the little hair on his noble head might have turned white. Blissfully ignorant, however, of his son's nefarious plans, Senhor Zumbeira,

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with an anticipatory gleam in his dreamy eyes, sat down in his sun-bathed little house, smelling of jasmine and noisy with crickets, to smoke a good Havana cigar. For, let's not beat about the bush, Senhor Zumbeira was in love.

It happened with the casualness characteristic of all great events in history. One day, upon rising, Senhor Zumbeira had found that the dark, vacant little room that was his heart was rented. At first he refused to believe it. His soul was as dry as an autumn leaf and he put no stock in unexpected flowerings. But when he went out into the street, the songs of birds were a heavenly symphony, the sun was a bell of light, the jasmines a fragrant snowfall, and the waters of the bay a red wine filling a golden goblet. Then he understood. He was in love! In love with the pretty little widow who had just moved into town, the one with snow-white skin, copper-colored hair, hands like two fluttering doves, and pectoral exuberances that were a challenge to a sensitive man like Senhor Zumbeira.

Silveiro, unaware of the romantic feelings that made his father want a de luxe leg so urgently, sat comfortably in his train compartment, wild dreams flashing before his eyes faster than the coffee fields beyond his window. He was young, he was attractive to and attracted by the ladies, and he was on his way to gay mad Rio, where, far from parental surveillance, he could progress much more quickly in his endeavor to decipher the enigma of woman. With an aviary singing wildly in his heart, he clambered down from the train at the station in Rio and, feeling very much like the legendary divers of Ceylon, plunged into the crowded avenues after the pearl of adventure.

His filial instincts, however, not being dead altogether, he entered a public telephone booth that had caught his eye and dutifully consulted a directory for the address of an orthopedic establishment and then lazily undertook the search for the shop.

The morning was radiant. A gentle breeze from the bay tenderly caressed Silveiro's cheeks. The joy of life bubbled through every one of his pores. Deep within him he could feel the thrilling titillation of adventure. In the glass of a shop window he adjusted his red, yellow and gray tie. His highly polished shoes reflected the sun. At a street corner, the fragrance of violets which an old woman sold from a basket pleasantly assailed him. Carried away by a sudden sentimental impulse, he bought a bunch of violets, which, ashamed of his weakness, he immediately hid between his hands. In this state of mind, he arrived at the shop.

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In the midst of hundreds of limbs hanging from the ceiling or on shelves, Silveiro had eyes only for the salesgirl, who, blonde and all legs, stood atop a ladder looking for something high up.

"May I help you?" she asked him in a singing voice from her perch.

Silveiro, dazed, stared at the girl's limbs, which, a foot above his head, revealed a run in the left stocking.

"What would you like?" she repeated.

"Legs—I mean, a leg."

"Are you interested in an ordinary or a de luxe leg?"

"De luxe. It's for my father."

"Ah!" she said with renewed interest. "Do you see anything you like?"

Silveiro's eyes almost popped out from their sockets.

"Just pick out anything you like," she added very sweetly.

Enchanted, Silveiro obeyed.

"Look out!" screamed the blonde, swaying dangerously on the ladder. "Don't tell me that's what you want?"

"No—I mean, yes," Silveiro stammered. "It's for my father."

"Oh!" the girl cried indignantly, descending the ladder and displaying the colossal possibilities of a well-adjusted sweater. "You want my legs for your father?"

"No, senhorita. Please forgive me. I want a leg for him, but, of course, not yours. Those—"

"Just a moment," the blonde interrupted him, looking at him with stern cobalt-blue eyes. "Don't get fresh. I don't think you want to buy a leg at all. I think you just want to flirt."

"How did you guess?" Silveiro asked instantly. A Don Juan is never flustered.

"By the violets you have brought me."

Snatching them from his hands, she buried her little nose in the tiny bouquet.

"Have you loved me long?" she asked him with a deep sigh.

For the answer the impetuous Silveiro embraced the blonde, verifying that the sweater was not artificially upholstered, and kissed her lips that tasted of violets and were wet with dew.

"After this," she whipered, recovering her breath, "You simply must come with me on my vacation. I leave this afternoon for Copacabana."

And that is just what they did. But after two weeks of swimming, sunbathing, cocktails, and passionate love-making with the blonde Roxana, even after he discovered that her hair was bleached, Silveiro was foolish enough to send a postcard to his father, to which the latter promptly replied with a telegram:

WHAT THE DEVIL ARE YOU DOING IN COPACABANA STOP I WANT MY LEG STOP BE QUICK ABOUT IT

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To which Silveiro with a complete lack of honesty replied:

LEG MANUFACTURERS ON SUMMER HOLIDAY STOP AM WAITING FOR THEM TO RETURN STOP YOU SHALL HAVE BEST LEG IN BRAZIL

That very afternoon, while lying on the beach soaking up the sun, he spoke to Roxana.

"Roxana, I must get busy about my father's leg."

She stopped making curls with the hair on his legs and threatened him with a tantalizing finger.

"Don't you like *my* legs any more?" she said with typical female incongruity.

"Roxana, I adore your legs but my father must have *his* leg."

"You'll never be rid of my legs as long as you live," she pouted. "Being with you is like being with Rudolph Valentino reincarnated. But I'll help you. My vacation ends the day after tomorrow. I shall go back to Rio, give them a week's notice, choose the best leg in the shop and we both will take it to your father."

The echo of these words was still ringing in Silveiro's ears when three days later at the beach casino, while trying to assuage his pain over Roxana's absence by imagining how some ladies frolicking on the sand would look in their birthday suits, he was handed two telegrams. The first was from Roxana:

I ADORE YOU PIGEON STOP SHOP BURNED DOWN DURING MY ABSENCE STOP NOT A SINGLE LEG LEFT STOP THERE WAS ONE BUT WHEN I PICKED IT UP IT FELL INTO PIECES STOP AM SAVING PIECES FOR YOU STOP WILL SEE YOU IN SIX DAYS STOP DONT YOU DARE FLIRT WITH ANYONE STOP I MEAN IT

The second was from Senhor Zumbeira:

SITUATION INTOLERABLE STOP SEND ME MY LEG STOP HOW DARE YOU DO THIS TO ME

Silveiro was so distressed by the telegrams that he had to resort to several double martinis for consolation. While he was musing bitterly that he had no leg and no money, two ladies wearing microscopic bikinis stopped at his table.

"I beg your pardon," said one of them, red haired and as tall and strong as an Amazon, "Haven't we met before?"

Silveiro never muffed such an opportunity.

"Of course we have. I met you in my dreams. You looked like a camelia playing tennis."

"How lovely!" said the woman, sitting close to him, and to the waiter who stood nearby, "Waiter, gin with just a wee bit of vermouth."

"How about me? Where do I

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stand here?" asked her friend, a tiny brunette with more curves than a basket of oranges.

"Senhorita," replied Silveiro, his head reeling from the cocktails and the women, "You are the technicolor film on the program of my dreams."

"He's a poet," declared the redhead, ordering another martini.

"In that case, won't you both accept," the gallant Silveiro offered, "a double martini with my heart instead of an olive?"

Evening surprised Silveiro on the beach arm-in-arm with the red Amazon and the delicate brunette. It turned out that the brunette was a teacher at a school for little girls near Silveiro's hometown, and the redhead was a pilot at the municipal airport in Rio de Janeiro. The sunset dyed in scarlet the trio's love talk. The first stars shone brightly on their triple autobiographical confession and the clear May moon shed light on their promises and vows. Of the rest of the night, Silveiro, drunk with martinis and love, retained only the vaguest memories. When two days later he left for Rio in search of his father's leg he only knew that two new women loved him madly and that he loved them both, that the pilot was as strong as a Valkyrie and the schoolteacher as fragile as a lily, and that both had promised to meet him in three days at the railroad station in Rio each with a leg for his father, which they personally would present to him.

When he reached Rio, a telegram from his father, in answer to one he had sent him the day before, was already waiting for him:

ARE YOU CRAZY STOP AM SENDING MONEY REQUESTED STOP REMEMBER YOU ARE NOT MARCO POLO STOP YOU ARE TRAVELING ONLY TO GET ME MY LEG STOP WILL FIX YOU WHEN YOU RETURN STOP FOR GODS SAKE SEND ME MY LEG

To which Silveiro replied:

RIO ALL OUT OF LEGS ON ACCOUNT OF INTERNATIONAL CONVENTION OF LEGLESS STOP WHAT VITAMINS DO YOU RECOMMEND FOR EXHAUSTION

Actually, the negligent son could not possibly imagine his father's trials and tribulations. While he was enjoying the gifts of Eros, Senhor Zumbeira was climbing the Golgotha of gall.

Two days after the portals of love opened wide to Senhor Zumbeira, the courting began. The widow, sensuous Senhora Minga, lived on a charming little property about one mile down the road from Senhor Zumbeira's house, and they agreed that he would visit her every night and, in the romantic Latin tradition,

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woo her through her grated window. While the widow sat inside the window in intimate semi-darkness, Senhor Zumbeira would sit outside the window and, watched by a curious moon, would whisper sweet nothings through the grate.

Encouraged by love, Senhor Zumbeira decided with much trepidation to sally forth with the third leg that his friend, the locksmith, had made. It was a contrivance of threatening aspect, made of a new variety of artificial rubber, another invention of the talented locksmith. Senhor Zumbeira, soaring on the wings of love, after bathing himself in lilac water, put on his new leg and best suit and began the tramp to the house of his beloved, escorted by a caravan of twinkling stars.

Two hours later, seated close to the grated window on a chair provided by his lady, he was pouring into her eager little ear a stream of poetry. The widow Minga, petite, curvaceous, all yielding flesh in perfumed face, listened coyly to her inspired cavalier and kept time to his words through the grate by affectionately drumming with her finger tips on his rubber leg. Even the frogs in the pond stopped their croaking to listen to the voice intoning the age-old Psalter of love. Suddenly the widow Minga uttered a little shriek.

"What is the matter, my love?" he asked anxiously.

"Your leg—it's both soft and hard!"

"Of course, delight of my soul," replied Senhor Zumbeira, blushing, "the one you are now touching is the good one. I turned around so you could run your fingers down my real leg too."

"You rascal! Let me have your rubber leg again. The other one frightens me."

"My little ivory-beaked dove, your word is my command."

But her next shriek was twice as sharp.

"What is it now, my little sugar baby?"

"Your artificial leg! It's growing! You're becoming *all* leg!"

Senhor Zumbeira was appalled when he verified her statement. The synthetic rubber, perhaps because of the humidity, was swelling to monstrous proportions. It was no longer a leg; it was a howitzer.

Senhor Zumbeira was not a man to lose his head in a crisis. After hastily reassuring his beloved and taking leave of her, he set out for home. At first it was not too difficult to walk, but soon his leg, which kept on growing relentlessly, forced him to skip and hop as if on stilts. An occult force, it seemed to him, kept hoisting him higher and higher, and by the time he was halfway home, he could grasp the branches

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of the trees. The last lap of the journey was sheer agony. The confounded leg finally came loose, and, there being no other alternative, the distraught Senhor Zumbeira embraced the leg as if it were a staff and he a pilgrim and thus concluded the painful trek home. A neighbor who heard his noisy approach looked out of the window and gasped in terror when he saw the heaving monstrosity and the panting Senhor Zumbeira clinging to it.

"What is it?" the neighbor's wife asked from within.

"It's a monstrous leg and Senhor Zumbeira is hanging on to it."

When a gang of children knocked at his door the following day and requested permission to make a canoe of his rejected leg, Senhor Zumbeira promptly sent another telegram to his son:

I WANT A LEG BUT ONE THAT DOES NOT GROW STOP YOU ARE AN UNNATURAL SON STOP I WILL FIX YOU

Crushing the message in his hand and beset by grave doubts concerning his father's mental condition, Silveiro wended his way through the crowded streets of Rio determined to get his father a leg. His head ached excruciatingly and his mouth held a mop instead of a tongue. This was the cruel payment for the delicious hours spent the night before in the company of his two lady friends. For, to celebrate his departure, the extraordinary creatures had invited him to a farewell dinner in the Golden Room of the Copacabana Palace. Silveiro would remember that night for the rest of his life. The brunette schoolteacher made a spectacular entrance in a gown of bright red silk so very tight that at first he thought her body had broken out in scarlet fever. But the red-haired pilot outdid her friend. The most splendid projections of her full-blown anatomy were most artfully covered with two kerchiefs of green gauze. And the dinner was royal. They sat at a candlelit table and ordered three triple martinis and three martini glasses filled with olives instead of martinis (a whim of Silveiro's), and, as a chaser, martinis served in beer glasses, four to a glass. Then, while the orchestra played a sultry samba, they devoured a capacious platter of hors d'oeuvres accompanied by a golden Sanlucar manzanilla, next a lobster Salmagundi with an excellent Marfil from Barcelona (Silveiro was partial to Spanish wines), then a *fejoada* with a fine Rioja wine, followed by a leg of lamb encircled by miniature pullets. At the sight of the leg of lamb, Silveiro turned pale.

"Take that away!" he screamed to the waiter.

"Over my dead body!" shouted

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the schoolteacher, firmly sinking her fork into the leg.

"Do try a chicken leg at least," the waiter suggested conciliatingly.

"He said a *chicken* leg!" exclaimed the redhead, trying to extricate herself from Silveiro's solid grasp on her knee under the table.

When finally the smoke of their cigarettes rose above the barrel-bellied glasses containing golden Fundador, the redhead climbed on the table and with eyes misted by emotion solemnly announced that she and she alone would take care of the dinner bill. The schoolteacher promptly pulled her down and retorted that if she thought that would entitle her to special rights on Silveiro's last night with them, she was vastly mistaken, for she would not lose sight of him until his train pulled out. The discussion grew alarmingly heated, and Silveiro, always a gentleman, came to the rescue, declaring that he would share his last hours with both of them, to which they replied that as a reward for his consideration they would allow him to pay the bill.

These delightful reminiscences kept Silveiro company until he reached the Avenida do Rio Branco, and by then nothing remained of his heroic resolution to get a leg for his father without further delay. Besides, fate had other plans for the great lover. His sentimental memories filled him with such nostalgia that when he passed one of the fashionable cafes on the avenue he could not resist the need to brace himself with a cognac—a double cognac, for Silveiro did everything in pairs.

Seated before his second double cognac and torn between filial scruples and the desire to examine the calves of the girl at the next table without arousing the suspicions of her escort, he began to ponder which of his three recent loves would make the best wife. Suddenly he felt the unpleasant sensation that someone's eyes were boring into the back of his neck and he turned around. His eyes beheld the Maharani of Kaputala.

The Maharani was dark and fat, but she undeniably had sex appeal. She was in the autumn of life and her eyes were as black and sultry as a clouded August night. She wore huge gold earrings and her red silk dress was heavily embroidered. A silver scarf was wound around her architectonic coiffure. In front of her, a little glass containing a green liquor sparkled with the intensity of an emerald. Her escorts, two bearded olive-skinned individuals with turban-wrapped heads, were drinking a milky punch sprinkled with cinnamon.

"Helooo!" she cooed at Sil-

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veiro, enveloping him in a look that burned him to the solar plexus.

"Hello!" he answered with his usual brightness.

"You know something?" she began mysteriously, her lips dyed green by the liquor.

"Do they know it too?" Silveiro interrupted cautiously, pointing to the two solemn gentlemen, who ignoring everything and everybody around them quietly sipped their punch.

"They," she said contemputuously, "are my eunuchs."

"Your uniques?" he asked.

"No, my eunuchs. You know . . ."

"Oh, I don't know very much."

She smiled insinuatingly.

"I started to tell you that you look like Gregory Peck."

"You flatter me."

"Don't be so modest."

She drank all of her green liquor.

"Do you know who I am?"

"I have seen you in my dreams," Silveiro affirmed, unaware that he was repeating himself.

"I am the Maharani of Kaputala."

"A Maharani!" Silveiro was overwhelmed. Maharanis belonged only in *The Thousand and One Nights*.

"Yes. The Maharajah is showing the city to his concubines and I am free all afternoon. What are you planning to do, Gregory?"

"I was going to buy a leg," Gregory replied.

"You need not go any further. I have two."

She tossed a few coins to her two escorts. "Here, go to the cinema. I shall be very busy with Gregory."

With the advent of the Maharani, Silveiro was transported to the fabulous world of the *Arabian Nights*. The Maharani's legs were short and heavy, but they were shrouded in veils of mystery and they swept away Silveiro's preoccupation about his father's leg.

"Where shall we go?" asked Silveiro excitedly as they left the cafe.

She smiled and her white teeth flashed with all the mystery of the Orient.

"Where we can be alone. The Maharajah won't be back until seven. We have eight hours to talk of love."

"Don't you think we may exhaust the subject sooner?"

"No, my adorable Gregory, because the Maharajah speaks to me of love only twice a year and in a great hurry and coughing."

The place to which the Maharani took Silveiro to talk of love was for the susceptible young man a heavenly dream come true. After crossing a long series of richly furnished rooms, they entered the royal chamber. Silveiro stared wide-eyed. Fabulous silks, velvets

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and damasks lined the vast room from wall to wall, the furniture was elaborately carved and encrusted with precious stones, and precious metal ornaments were scattered around in barbaric confusion.

The Maharani, after making herself comfortable in a blue silk robe sparkling with rubies and sapphires, sat down in a throne-like chair of silver draped with a mantle of gold cloth. Twelve black slave girls, wearing only turbans and a loincloth of gold, watched over their mistress, their ebony breasts shimmering in the light of the torches and in Silveiro's eager eyes. Silveiro, seated on a leopard-covered ottoman at the feet of the Maharani, played with the petals of a huge orchid in a vase of jasper and agate. In other vessels of mother-of-pearl and crystal, exotic flowers exhaled intoxicating perfumes. While the slave girls strummed harps of gold, a blonde statuesque servant girl placed between the lovers gorgeous trays overflowing with fragrant fruits. Another girl served them walnuts, raisins, dates, filberts and red warm wine in gem-encrusted gold goblets. With plump little fingers the Maharani herself fed Silveiro the choicest morsels. They drank from the same glass and washed their hands in rose-shaped crystal bowls filled with rose water. Then the Maharani, with a wave of the hand, commanded the harpists to cease playing, sprinkled her face with the essence of rare flowers and opened her arms.

"Speak to me of love," she commanded Silveiro.

Fortunately for Silveiro, the command was mere rhetoric, for she promptly shut her eyes and her lips avidly searched for Silveiro's, found them, and stuck to them, which precluded all possibility of conversation.

The Maharani's fleshy lips tasted of spice and musk and were sticky with sweets. When suddenly she showed unequivocal signs of overpowering passion, Silveiro struggled out of her arms, protesting, "I will not speak of love in front of them." He pointed to the black slave girls, who, as rigid and silent as statues, stood staring at them with impassive eyes.

The Maharani of Kaputala smiled scornfully.

"Don't worry about them," she said loosening the girdle that held back so much of her. "The Maharajah always speaks to me of love in front of them."

Silveiro's sensibilities were outraged.

"That's setting young girls a very bad example. Besides, I'm shy. And the sight of so many legs brings back sad memories."

The Maharani condescendingly ordered the girls out and then turned to him again.

"My own Gregory . . ."

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An hour later, her favorite slave girl entered the royal chamber to announce to a happy, gratified Maharani and an asthmatic Silveiro that the Majarajah had returned sooner than expected and was already in the antechamber.

Silveiro jumped to his feet. In a flash he saw himself beheaded, castrated, drawn and quartered, but the Maharani remained cool and collected.

"Have the Maharajah come in," she ordered indifferently.

Preceded by his royal retinue, there entered an obese little man dressed in a multi-colored tunic and with a long black beard punctuated with tiny diamonds.

"May Allah keep you!"

"May he keep you, too, my exalted husband," she replied. "May I present Gregory Peck to Your Highness." She pointed to Silveiro's legs protruding from under the bed linen.

"Senhor Maharajah—" Silveiro began apologetically, his legs buckling as he tried to stand up.

"Not a word, Senhor Peck," the Maharajah interposed. "I understand and I demand reparation."

"My name is Zumbeira," Silveiro protested timorously.

"That makes no difference. You leave me no alternative: either torture followed by death or reparation."

"If anyone needs to be repaired it's me," muttered Silveiro, looking out of the corner of his eye at the generous proportions of the Maharani, "but I'll do anything you say."

"Then, let no more be said. My spies have told me all about you. When do you return home?"

"As soon as I find the leg—"

"Senhor Peck," the Maharajah interrupted him sternly, "You won't find better legs than the Maharani's. As reparation I demand that you take her with you."

"What?" shrieked a horrified Silveiro. "All of her? Forever?"

"Oh, Gregory!" the Maharani cried out, her mouth stuffed with sweets. "How divine!"

Silveiro, ready to faint, nodded his consent to the Maharajah, who promptly told him the time and place where the Maharani would meet him to go back home with him.

"Gregory," she called as he was leaving, "may I take my two eunuchs with me?"

"No! No! No!" he cried in agony.

"Very well. It really doesn't matter," she granted. "If I'm with you I won't need them."

The last thing Silveiro saw as he went out was the Maharani's bare fat leg swinging over the edge of the scarlet bed of love.

At that very moment, more than a thousand miles away, another leg was swinging in great agitation. It belonged to Senhor Zumbeira, who seated on his bed was

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gravely pondering his desperate situation. He had no artificial leg of any kind. Silveiro was traipsing across all seven seas and three continents in search of a leg as elusive as the Holy Grail; his economic resources were dwindling as quickly as his patience; and, worst of all, he would not be able to court the widow Minga that evening. But a great man shows the stuff he is made of in critical situations. It was impossible to obtain at once an artificial leg, but what did one's friends have good healthy limbs for?

A telephone call promptly solved the problem. At nightfall, wearing his new green checked suit, carrying his gilt-handled cane and a sprig of heliotrope in his lapel, with his heart pumping dreams instead of blood, Senhor Zumbeira started out. Or should we be more exact and say that he started out *on* his friends. These friends, Oswaldo and Sebastiao de Melba, were chiropodists and first cousins of Senhor Zumbeira. Officially they were bachelors, and, of course, they were anxious to be of help to Senhor Zumbeira, whose right foot corns they had been pruning, scraping, filing and polishing for years. The idea of bearing the fine old gentleman in their arms to his appointment with love struck them as terribly romantic.

At exactly seven they came to fetch him, their heads haloed in an aura of rum and their eyes bright with the light of adventure. Senhor Zumbeira was hoisted on to their shoulders, his left backside on Oswaldo, his right on Sebastiao, and then, to avoid his falling, they securely fastened the straps of a portmanteau over his thighs and under their arms. The fate of the brave and gallant old man was irrevocably joined to that of his human mounts. Thus the three of them—one above and two below—set forth, accompanied by a star that seemed to leap from branch to branch.

At first the undertaking was very successful. The cousins were as gentle with their charge as with a baby. Senhor Zumbeira in a low voice rehearsed the song of love he would intone that night, and the cousins listened to him in ravishment. It was the azure hour when the fragrant woods speak in hushed tones. A belated bird hovered in the dark soft air. Distant bells rang out tender canticles, and the frogs threaded the countryside with the chain stitch of their endless croaking.

But the measure beat out by the striding cousins gradually changed from the rock of a cradle to a disturbing trot, then to a mad gallop, and lastly to the careening of a puny boat at the mercy of raging waters. Bellowing spicy little tunes, the cousins lurched from one side of the road to the other in a wild zigzag, and the alarmed

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Senhor Zumbeira willy-nilly lurched with them. Every time the unsteady legs of the Melba boys described their unpredictable arabesques, poor Senhor Zumbeira was sure that he would plummet to his death. Finally, he could stand it no longer.

"Oswaldo! Sebastiao! Stop! Let me down!"

"Can't!" Sebastiao answered. "It's like a bicycle—if we stop pedaling, we fall."

"And if we fall, we shall never get up," Oswaldo added encouragingly.

"You have been drinking," Senhor Zumbeira shreiked, horrified.

Sebastiao executed a merry leap that propelled them all six feet forward. "Took you a long time to smell it. Having sinus trouble?"

"Stop this very moment," roared Senhor Zumbeira, bouncing on the cousins' shoulders like a log on a choppy sea. "And throw that bottle away. It's too big for your pocket anyway."

Oswaldo quickly drained the bottle and then obeyed.

"Sebastiao," he shouted to his cousin, "I'll race you."

Battered from pillar to post, first on his side, then on his back, soaring to heaven only to nosedive back to earth, Senhor Zumbeira finally landed, miraculously intact, at the window of his lady, who, seated in the shadows, waited patiently for her lover.

Covered with sweat and dust, their clothes torn and begrimed, the three men solemnly greeted the little widow. Senhor Zumbeira breathlessly explained his misfortunes and she bestowed on him a gracious smile. The men sat down to undo the straps that held them together as one. Such a cyclopean undertaking! Neither Senhor Zumbeira's trembling hands nor the Melba boys' alcoholic endeavors were of any avail. Through the iron lacework of her window the widow Minga lent a helping hand. How touching it was to watch her tendril-like fingers struggling with the rough heavy straps! She even bent her little silver scissors in a desperate attempt to sever the ignoble bond, and Senhor Zumbeira could have cried all night, so mortified was he.

"You will have to remain like this," finally the widow Minga said, appraising out of the corner of her eye the physical possibilities of the Melba cousins.

"Heitor the milkman will undo the straps in the morning."

The cousins cheered the suggestion. The night was warm and clear, the grass soft and yielding, the decoleté of the widow Minga, a soft blinding whiteness on the other side of the grillwork, was tantalizing. What could Senhor Zumbeira do? He began to speak of the torment of his love.

At first it went smoothly. The

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Melba boys were entranced by the fiery eloquence of the suitor, but soon they began to show a critical attitude. Sebastiao complained of repetitiousness and Oswaldo of lack of imagination. When Senhor Zumbeira declared his desire to lead the widow to the altar, Sebastiao promptly countered that he would be delighted to lead her *anywhere* she liked. The old man ignored their interruptions and bravely continued his sweet whisperings, whereupon the cousins began to play cards and were soon quarreling and insulting each other, forcing Senhor Zumbeira to shout his portrayal of the delights of family life. Sebastiao and Oswaldo finally interrupted him to ask the widow for a bottle of rum or at least to allow her maid to come out and keep them company.

Just the same, Senhor Zumbeira had not been prevented from holding his beloved's hand, but when he brought it to his lips, he discovered with dismay that it belonged to Oswaldo and when he furtively pinched the widow's leg, it was Sebastiao who let out a squeal.

At the stroke of midnight the sky darkened ominously and soon the rain came down in torrents. The widow Minga informed them that she was all alone in the house and could not possibly ask them in. Since Senhor Zumbeira energetically rejected all proposals to return home on his cousins' shoulders, there was nothing else to do but wait for Heitor the milkman. The solicitous widow provided blankets and her ironing board, and after a fashion they rigged up a tent, but all attempts to light a fire inside the tent were futile. Finally, worn out and deeply grieved, Senhor Zumbeira fell asleep to the raucous strains of a *Lohengrin* aria executed by Oswaldo and accompanied by Sebastiao's snores.

Hundreds of miles away, Silveiro, in a desperate attempt to forget his troubles, was attending the ballet at the great Rio opera house. Early the following morning he was supposed to meet at the station Roxana the blonde saleslgirl, the brunette schoolteacher, the redheaded pilot, and the Maharani. Without a cruzeiro in his pocket and, even worse, without a leg under his arm, but escorted by four women who expected him to marry them, he would have to return home and face the highly justified paternal wrath.

At first the music failed to dispel the memory of the last telegram received from his father:

MY LEG OR YOUR HEAD

Silveiro was still trembling at such frightening directness, when the theatre was plunged into silky darkness. The snow-white ballerinas and the *première danseuse,* wonderfully garbed as a swan, displayed legs of such sculptural

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proportions that gradually Silveiro's obsession with his father's leg faded away. The decor boasted a sea of blue gauze and foam of white lace, and the dancers looked as sweet as sugarplums. Silveiro, the only occupant of a dark intimate box, felt transported. How pleasant to look down upon a vast sea of patent-leather hair, starched shirt fronts, golden coiffures and bare alabaster shoulders, and yet to be alone, discreetly concealed by friendly velvet curtains! Always a man with foresight, he had brought along an enormous gold thermos bottle, a gift of the Maharani, and now he unscrewed the cup and poured himself a double martini. He sipped it delicately, while on the stage the swan enveloped her pink body in heavenly feathers. Suddenly his nostrils perceived a scent so enticing that he felt compelled to look around. Peeping through the curtains that separated box from box, only a few inches from his own face, he saw a small angelic face.

The face, he was sure, had escaped from an Egyptian bas-relief. Black lacquered hair emphasized the translucent sheen on ivory skin, and almond-shaped eyes and a tiny bud of a nose kept pace with a mouth as red, sweet and rounded as the cherry of a manhattan.

"Senhor," she said in a demure voice.

"Senhorita," he replied in ecstasy, trying to hide the thermos.

"I am very thirsty. Would you get me a glass of milk?" she begged as if he had a cow in his box.

"Gladly, senhorita," he said, "but I don't know where they keep the milk here."

"Isn't that milk you're drinking?"

Silveiro blushed to the roots of his hair.

"Oh, no, senhorita. It's—it's a tonic. They call it a cocktail."

"I have never heard of it," she replied, dazzling him with the row of pearls in her mouth.

"They say it's rich in amino acids."

"Oh, then it's a martini."

"Yes, but it will never quench your thirst."

"Just the same, I shall try it. Kindly pour me a glass."

Silveiro gallantly poured a cupful and she held out a sinuous arm covered with bracelets in the shape of dragons and snakes.

"And the olives?" she asked sternly.

"Forgive me, I forgot." And he took two olives out of his pocket and dropped them in the cup.

The young lady downed the drink in one gulp.

"Not bad," she remarked. "A bit heavy."

"The gin is imported," he said, somewhat nettled.

"I mean the ballet. May I have another?"

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Two drinks later, she thanked him and was about to withdraw into her box.

"Wait!" cried the conquered Silveiro. "What is your name?"

"Princess Tsin," and she disappeared behind the curtains.

Petrouchka's joyous carnival, with its clowns, shepherdesses, hawkers and soldiers dancing orgiastically surprised Silveiro in the act of caressing the olive pit of his sixth martini with his fingers and a new dream with his thoughts. He was in love! The sweet innocence of Princess Tsin —a perfect cross between the ancient Orient and the modern West —excited his fancy.

As he reached for his thermos, his hand encountered instead a tender arm. Above it, the face of his new love looked at him solemnly.

"I'm dying of thirst," she said in a voice that was a fountain of bells.

Sighing, he held the cup out to her. She had removed her garnet-colored scarf and Silveiro beheld a delicate alabaster throat.

"No olives!" she protested energetically, tossing the two he offered her into the orchestra pit. "It has too much vermouth—I can smell it."

"Where do you come from?" Silveiro queried, completely entranced.

"From South Asia. I like you—you're handsome," she declared.

"Thank you, Princess Tsin. You have lovely knuckles."

"How poetic! But my name is Princess Gah," and the curtain closed again.

Silveiro was utterly fascinated by the complex personality of the Asian princess. With eyes dimmed by tears, he stared at the pink ballerina dancing the *Spectre de la Rose* on a lilac stage. How divinely happy he could be the rest of his life with the little girl of the pearly teeth and the cherry mouth! Perhaps they could even go to live in her native land. Delicious visions of exotic celebrations in sumptuous Orient chambers, with slant-eyed girls playing tambourines in the background, wildly flashed through his mind.

His delightful thoughts were interrupted by another cloud of perfume which made him envision a path carpeted with dying violets under an autumn moon. Silveiro turned his head and upon seeing the delicate oval of the beloved face, automatically handed the thermos to the adorable but unquenchably thirsty little girl.

"How dare you offer me alcohol! I never touch it!" Her delicious lips pouted in disgust and her voice was the plaint of ivory violins.

"But that wasn't milk you had before, Princess Gah," he protested.

"My name is Princess Dah," she corrected him. "You're drunk."

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"Senhorita—I mean, Princess —" Silveiro stammered.

"Let's stop joking," said an invisible tinkling voice, and a face identical to that of Princess Dah appeared through the curtains.

"Damn it!" exclaimed Silveiro, who on occasions could wax profane. "These martinis are very potent."

"It's not the martinis," said a third tinkling voice and still another head, a replica of the other two, appeared. "There are three of us and we all look alike."

"Who are you?" Silveiro queried wild-eyed. And, learned man that he was, he added, "The McGuire Sisters?"

"We are the Princesses Tsin, Gah, and Dah," one of them replied.

"But I'm in love with one of you," Silveiro exclaimed in anguish. "Which one is it?"

"It doesn't matter," answered one of the little faces. "I adore you."

"And I love you madly," added her sister.

And the third one said, "It may be the influence of my sisters, but I think I love you too."

"Princesses," replied Silveiro valiantly, "there is enough room in my heart for all three of you. Let's leave. I shall meet you out in front with a taxi. We'll have supper at the Casablanca."

He was giving instructions to the taxi driver when he saw the sisters dash out of the opera house, one big cloud of blue silk, and into the car. Silveiro, completely overpowered by the martinis and his dreams, clambered in after them and found himself rolling on the laps of all three sisters. Gallantly he passed his arm around the waist closest to him.

"Oh, that tickles!" the three of them shrieked.

"But I'm holding only one waist," cried Silveiro.

"Of course you are," they answered, "but it belongs to all three of us. We're the famous 'Triamese' sisters. Six legs, six arms and one waist—but three hearts to love you."

A shower of kisses descended upon a half-faint Silveiro.

Meantime, back home, dawn awakened Senhor Zumbeira. The night had passed peacefully. enough. Only once had Oswaldo shaken him out of his sleep to show him the flea circus he always carried with him, but finally they both had gone back to sleep. Senhor Zumbeira sat up, pushing aside the heaving hillock of flesh to which he was bound, and looked around.

The garden, cool and green, greeted the dawn through the fragrant mouth of each and every one of its flowers. The sky was turning pink and the cocks began to clear their throats. Through the window grate two compassion-

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ate white hands thrust out a thermos bottle. The aroma of coffee awakened the cousins and, with tongues of felt and eyes of frosted glass, they greeted the widow and avidly drank the hot dark brew. Senhor Zumbeira heaved a long deep sigh. It was his birthday, he remembered bitterly, and Silveiro was supposed to return with his artificial leg. Where was his leg? Nay, where was Silveiro? He sighed again and the others, contaminated, did the same. The widow sat down by the window with her sewing basket, and Senhor Zumbeira, sad-eyed and with Sebastiao's elbow in his stomach and Oswaldo's leg in his right kidney, watched the delicate fingers skillfully manipulating silk, needle, thread and thimble.

It was then that a big dark shadow crossed the garden path. A girl, with hair so yellow that it would have made a sunflower envious and with a package under her arm, stood staring down at them. At her side, pale and haggard but elegant and dignified, stood Silveiro.

"We were home, but the neighbors told us that you were here," Silveiro explained, trying to sound natural. He pointed to the cousins, "What's that?"

"That," Senhor Zumbeira answered, pushing Sebastiao's legs away and barely containing his rage, "is the result of not having my leg."

"Oh," Silveiro remarked, now that it was all clear to him.

"And who is *that?"* the jealous widow asked, pointing to the curvaceous blonde.

"My fiancée," Silveiro replied.

"This," said the blonde Roxana, handing her parcel to Senhor Zumbeira, "is your leg. It may be a trifle battered from the trip . . ."

Feverishly the old man began to unwrap the package. Silveiro smiled slyly. Since there had been no money to buy a new leg, he had made Roxana wrap up the broken one. They could always say that it had been broken in the jolting train. Senhor Zumbeira opened the package and let out such a cry of indignation that Silveiro was paralyzed with fear. In her anxiety to please, Roxana had wrapped each piece of the shattered leg in tissue paper.

"What's going on here?" just then a voice asked behind them.

They all turned around. Leaning on a magnolia tree, her hair afire with sun, was a gorgeous redhead and at her side a sprightly little brunette with a curvaceous figure.

"Papa," said Silveiro, deeply grateful for the sudden rescue, "may I introduce the two women of my dreams? We shall be married soon."

The widow let out a little scream, for, startled by Silveiro's confession, she had pricked her finger.

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"The boy is crazy!" exclaimed Senhor Zumbeira.

"What a man!" said Oswaldo. "What has he got?"

"Maybe there will be one left over for us," Sebastiao said hopefully, straightening his tie.

At that moment the corpulent Maharani pushed everyone aside and stepped forward with great majesty. Her brilliant red tunic eclipsed all the flowers in the garden and her musk perfume that of the jasmine.

"Now what?" asked Senhor Zumbeira sarcastically. "Have you brought a fortune teller to tell you whom to marry?"

"Papa," said Silveiro with uncommon dignity, "the Maharani of Kaputala may be the future mother of your grandchildren."

"Oh!" groaned Senhor Zumbeira, half faint.

"*My* grandchildren," sighed the widow, joining Silveiro's popular front.

A huge question mark with a dot the size of a football suddenly crystallized in the old man's dilated eyes. With trembling finger he pointed to the garden gate.

"This is the first time that coffee made me see triple," he cried.

"It's not the coffee, papa," replied Silveiro, gallantly offering his arm to the three princesses. "These young ladies may look like one and the same but they really are three. And yet I can't say that they are three because they really are one. What I mean is—there are the Triamese sisters with one waist, three heads, six arms and six legs. I am going to marry her—I mean, them."

"Six legs," Senhor Zumbeira mused sadly, "six legs, alive and kicking for you, and for me not even a wooden one."

"These three," asked Princess Tsin, pointing at the gaping Melba cousins and Senhor Zumbeira, "are they Triamese too?"

Only then did it occur to Silveiro that he ought to help his father. With his strong hands he untied the straps and gently rubbed his father's benumbed extremities.

"My son," whispered the old man, "did you promise to marry all five—I mean, all seven?"

"Yes, papa," Silveiro answered modestly.

"And you brought them all here with that understanding?"

"Of course, papa."

"Son," proclaimed his father proudly, "you are every inch a Zumbeira, a son worthy—"

Great sonorous waves of music interrupted him, and, bewildered, they all looked around. Above the low garden fences which faced a vast expanse of grass-carpeted land, they beheld an incredible spectacle. Scores of little girls, dressed in starched white, slowly approached intoning a lovely hymn, each one proudly bearing aloft an artificial leg. As far as the

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naked eye could see, legs of all shapes, colors and sizes, beribboned and wreathed in orange blossoms, wavered in the air. Never ceasing their singing, the girls filed by the garden gate, depositing the beribboned legs in a heap before the house.

"The girls are from my school," the brunette schoolteacher explained to Silveiro, blushing. "Each family contributed a leg as a wedding gift, so that your noble progenitor might have his choice."

Senhor Zumbeira, moved to tears, bestowed a paternal kiss on the schoolteacher's brow. But just then someone screamed.

"Get the girls out of the way! The camels will crush them!"

There was general confusion. The girls, screaming, scattered like mice before a cat. The caravan advanced majestically into sight. Twenty? Forty? One hundred? With the excitement no one remembered to count them. But there were camels and camels and more camels, all laden with huge bundles of artificial legs of all sorts, tied with sashes of silver and gold. And with the camels came Nubian slaves, wearing scarlet turbans and jingling bracelets on their ankles, and carrying large banners with inscriptions in huge gold letters reading: THE FINEST LEGS FOR THE FINEST GENTLEMAN. THERE IS NO LEG GOOD ENOUGH FOR SENHOR ZUMBEIRA. The slaves unloaded the legs at the garden gate. The children shouted with joy, and streamers of all colors waved wildly under a magnificent sun.

"I didn't do it all myself," the Maharani explained modestly. "The Maharajah lent me his slaves and camels."

She had barely said the last words when the guide of the caravan began to shout.

"Quickly! Finish unloading! Let's go! The elephants are coming!"

"This is," Tsin said, "the gift," continued Gah, "of the Triamese sisters," finished Dah.

The new caravan far outdid its predecessor in quantity and splendor. The famous hundred white elephants of Siam, draped with rare silks, with ivory litters topped with mother-of-pearl towers, guided by bejeweled slave girls, advanced majestically in double file, dispersing the frightened camels. To the sound of snake-skin drums, the colossal burden of the elephants was unloaded: legs and legs and legs. Exotic, costly legs. Legs made of bone, legs fashioned from the cedars of Lebanon, legs of ebony and shell, legs encrusted with gold and precious stones, even legs equipped with music boxes.

Suddenly the elephant-leader of the caravan—a colossus, a cathedral—rose on its hind legs and sniffed the air, and then

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everyone without exception, children, slaves, camels, elephants, Silveiro, the cousins, the seven fiancées, the widow Minga and Senhor Zumbeira, looked up at the sky. The roar of motors ushered in a magnificent spectacle. One, five, dozens of little black spots, and finally ten squadrons of ten planes each flew over them in perfect formation.

"I thought they would never come," said the redhaired pilot with a tone of relief. "These are my friends and fellow fliers bringing their wedding gifts in their own planes."

A few moments later, over camels and elephants and the stupefied group in the garden, there descended a torrent of legs, which suddenly came to a stop in midair and then floated down gracefully, each one attached to a colored parachute, green, red, blue and violet. Some of the parachutes failed to open and everyone quickly sought shelter under trees and bushes. When they finally ventured out again, the planes were mere dots in the distant sky, and the children, the slaves, the camels and the elephants a cloud of dust far down the road.

"My son," said Senhor Zumbeira with tear-misted eyes, "with all these legs I can set up the greatest artificial leg center in the world. A city of legs. We shall call it Zumbeira."

How was the excited Senhor Zumbeira to know that his words were seeds that one day would blossom into the famous city we all know?

"And I," said the widow shyly, "will at last be able to replace my wooden leg, which is quite worn out."

"You, too, have an artificial leg?" Senhor Zumbeira queried in consternation.

"Yes, my love."

"But I—I pinched you one night through the window grate and both your legs were flesh and blood," Senhor Zumbeira, blushing, confessed.

"It was not me you pinched in the dark," she replied. "It was Zoila, my maid.

Senhor Zumbeira speculated a moment. "It doesn't matter, beloved. I love you dearly just the same. Besides—we shall keep Zoila with us."

"Papa," Silveiro interrupted them, "my mission here has been accomplished. I shall leave now."

"Alone?"

"No, with my seven fiancées. I love them all and cannot live without them. There is only one solution. To practice that noble custom of the ancient Orient: the harem. We shall live half of the year in the palace of the princesses and the other half at the Maharani's."

Senhor Zumbeira, embracing his son, whispered in his ear,

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"How will you manage it with the Triamese sisters?"

"Oh, that's simple. Two will play checkers while waiting."

Silveiro, followed by his seven women, departed, and Senhor Zumbeira and the little widow stood by the garden gate waving their respective artificial legs like handkerchiefs until the group finally disappeared down the sunburned road.

And this is how the town of Zumbeira came to be born. What was that you said? Oh, you already knew the story. Well, I warned you at the beginning that it was *very* well known.

THIS MONTH'S COVER

This month's cover by Chesley Bonestell pictures a binary or double star found in the constellation Perseus. The star is known as R W Persei. It consist of a large, dim orange star and a smaller blue companion. They rotate around each other in a period of about two weeks. The double star shares a common envelope of gas and the smaller blue star has a ring of incandescent hydrogen. In the foreground is a hypothetical satellite on which the double star creates interesting shadows.

The initials RW simply indicate the order in which the variable star was discovered in a constellation. For some reason, R is used as a starting point. After reaching Z, the progression is RR, RS, RT . . . RZ; then SS . . . SZ; and so on down to ZZ.

This painting will appear in a new book by Chesley Bonestell and Willy Ley. Tentatively titled "Beyond the Solar System; Man's Final Adventure," it will be published by Viking Press.

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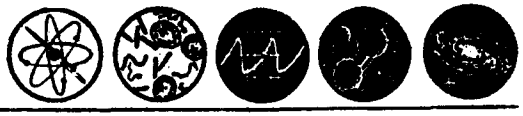

BINARY NUMBERS: A DOUBLE FEATURE

The growing importance of this form of enumeration—indeed, of computation—makes appropriate some study of it by The Magazine at this time. We were fortunate to be offered Frederik Pohl's article on a proposed "language" of binary numbers—to be precise, the article was offered to our predecessor, Robert P. Mills, The Kindly Editor; and he it was who suggested that Isaac Asimov (whom, out of the Kindliness of his heart, he was wont to term The Good Doctor) devote his monthly column to the subject of the translation of number systems, to serve also as an introduction of a sort to Mr. Pohl's more specialized article. This having been done, both important essays now await your careful and deserved attention.

The poet Pope, referring to his precocious devotion to rhyme, wrote that he "lisped in numbers, for the numbers came." *Professor Asimov, on the other hand, in speaking of numbers (as he does here), articulates distinctly. Alas—though he be a good mathematician, his titles don't scan for shucks.*

ONE, TEN, BUCKLE MY SHOE

by Isaac Asimov

I HAVE ALWAYS BEEN TAKEN ABACK A LITTLE AT MY INABILITY TO solve mathematical conundrums since (in my secret heart of hearts) I feel this to be out of character for me. To be sure, numerous dear

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friends have offered the explanation that, deep within me, there rests an artfully concealed vein of stupidity, but this theory has somehow never commended itself to me.

Unfortunately, I have no alternate explanation to suggest.

You can well imagine, then, that when I come across a puzzle to which I *can* find the answer, my heart fairly sings. This happened to me once when I was quite young and I have never forgotten it. Let me explain it to you in some detail because it will get me somewhere I want to go.

The problem, in essence, is this. You are offered any number of unit weights: one-gram, two-gram, three-gram, four-gram and so on. Out of these you may choose a sufficient number so that by adding them together in the proper manner, you may be able to weigh out any integral number of grams from one to a thousand. Well, then, how can you choose the weights in such a way as to end with the smallest possible number that will turn the trick?

I reasoned this way—

I must start with a 1-gram weight, because only by using it can I weigh out one gram. Now if I take a second 1-gram weight, I can weigh out two grams by using both 1-gram weights. However, I can economize by taking a 2-gram weight instead of a second 1-gram weight, for then not only can I weigh out two grams with it, but I can also weigh out three grams, by using the 2-gram plus the 1-gram.

What's next? A 3-gram weight perhaps? That would be wasteful because three grams can already be weighed out by the 2-gram plus the 1-gram. So I went up a step and chose a 4-gram weight. That gave me not only the possibility of weighing four grams, but also five grams (4-gram plus 1-gram), six grams (4-gram plus 2-gram) and seven grams (4-gram plus 2-gram plus 1-gram).

By then I was beginning to see a pattern. If seven grams was the most I could now reach, I would take an 8-gram weight as my next choice and that would carry me through each integral weight to fifteen grams (8-gram plus 4-gram plus 2-gram plus 1-gram). The next weight would be a 16-gram one, and it was clear to me that in order to weigh out any number of grams one had to take a series of weights (beginning with the 1-gram) each one of which was double the next smaller.

That meant that I could weigh out any number of grams from one to a thousand by means of ten and only ten weights: a 1-gram, 2-gram, 4-gram, 8-gram, 16-gram, 32-gram, 64-gram, 128-gram, 256-gram, and 512-gram. In fact these weights would carry me up to 1,023 grams.

Now we can forget weights and work with numbers only. Using the

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numbers 1, 2, 4, 8, 16, 32, 64, 128, 256, and 512 and those only you can express any other number up to and including 1,023 by adding two or more of them. For instance, the number 100 can be expressed as 64 plus 32 plus 4. The number 729 can be expressed as 512 plus 128 plus 64 plus 16 plus 8 plus 1. And, of course, 1,023 can be expressed as the sum of all ten numbers.

If you add to this list of numbers 1,024, then you can continue forming numbers up to 2,047; and if you next add 2,048, you can continue forming numbers up to 4,095; and if you next—

Well, if you start with 1 and continue doubling indefinitely, you will have a series of numbers which, by appropriate addition, can be used to express any finite number at all.

So far, so good; but our interesting series of numbers: 1, 2, 4, 8, 16, 32, 64 . . . seems a little miscellaneous. Surely there must be a neater way of expressing it. And there is.

Let's forget 1 for a minute and tackle 2. If we do that, we can begin with the momentous statement that 2 is 2 (Any argument?) Going to the next number, we can say that 4 is 2 times 2. Then 8 is 2 times 2 times 2; 16 is 2 times 2 times 2 times 2; 32 is. . . . But you get the idea.

So we can set up the series (continuing to ignore 1) as 2, 2 times 2, 2 times 2 times 2, 2 times 2 times 2 times 2, and so on. There is a kind of pleasing uniformity and regularity about this but all those 2 times 2 times 2's create spots before the eyes. Therefore, instead of writing out all the 2's, it would be convenient to note how many 2's are being multiplied together by a little number called an "exponent."

Thus, if 4 is equal to 2 times 2, we will call it 2^2 (two to the second power, or two-square). Again if 8 is 2 times 2 times 2, we can take note of the three 2's multiplied together by writing 8 as 2^3 (two to the third power, or two-cube). Following that line of attack we would have 16 as 2^4 (two to the fourth power), 32 as 2^5 (two to the fifth power) and so on. As for 2 itself, only one 2 is involved and we call it 2^1 (two to the first power).

One more thing. We can decide to let 2^0 (two to the zeroth power) be equal to 1. (In fact, it is convenient to let any number to the zeroth power be equal to 1. Thus, 3^0 equals 1, and so does 17^0 and $1{,}965{,}211^0$. For the moment, however, we are interested only in 2^0 and we are letting that equal 1.)

Well, then, instead of having the series 1, 2, 4, 8, 16, 32, 64 . . . we can have 2^0, 2^1, 2^2, 2^3, 2^4, 2^5, 2^6 . . . It's the same series as far as the

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value of the individual members are concerned but the second way of writing it is prettier somehow and, as we shall see, more useful.

We can express any number in terms of these powers of 2. I said earlier that 100 could be expressed as 64 plus 32 plus 4. This means it can be expressed as 2^6 plus 2^5 plus 2^2. In the same way, if 729 is equal to 512 plus 128 plus 64 plus 16 plus 8 plus 1, then it can also be expressed as 2^9 plus 2^7 plus 2^6 plus 2^4 plus 2^3 plus 2^0. And of course, 1,023 is 2^9 plus 2^8 plus 2^7 plus 2^6 plus 2^5 plus 2^4 plus 2^3 plus 2^2 plus 2^1 plus 2^0.

But let's be sytematic about this. We are using ten different powers of 2 to express any number below 1,024, so let's mention all of them as a matter of course. If we don't want to use a certain power in the addition that is required to express a particular number, then we need merely multiply it by 0. If we want to use it we multiply it by 1. Those are the only alternatives; we either use a certain power, or we don't use it; we either multiply it by 1 or by 0.

Using a dot to signify multiplication, we can say that 1,023 is: 1.2^9 plus 1.2^8 plus 1.2^7 plus 1.2^6 plus 1.2^5 plus 1.2^4 plus 1.2^3 plus 1.2^2 plus 1.2^1 plus 1.2^0. All the powers are used. In expressing 729, however, we would have: 1.2^9 p' is 0.2^8 plus 1.2^7 plus 1.2^6 plus 0.2^5 plus 1.2^4 plus 1.2^3 plus 0.2^2 plus 0.2^1 plus 1.2^0. And again, in expressing 100, we can write: 0.2^9 plus 0.2^8 plus 0.2^7 plus 1.2^6 plus 1.2^5 plus 0.2^4 plus 0.2^3 plus 1.2^2 plus 0.2^1 plus 0.2^0.

But why bother, you might ask, to include those powers you don't use. You write them down and then wipe them out by multiplying them by zero. The point is, however, that if you systematically write them all out, without exception, you can take it for granted that they are there and omit them altogether, keeping only the 1's and the 0's.

Thus, we can write 1,023 as 1111111111; we can write 729 as 1011011001; and we can write 100 as 0001100100.

In fact, we can be systematic about this and, remembering the order of the powers, we can use the ten powers to express all the numbers up to 1,023 this way:

0000000001 equals 1
0000000010 equals 2
0000000011 equals 3
0000000100 equals 4
0000000101 equals 5
0000000110 equals 6
0000000111 equals 7, all the way up to . . .
1111111111 equals 1,023.

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Of course, we don't have to confine ourselves to ten powers of 2, we can have eleven powers, or fourteen, or fifty-three or an infinite number. However it would get wearisome writing down an infinite number of 1's and 0's just to indicate whether each one of an infinite number of powers of 2 is used or is not used. So it is conventional to leave out all the high powers of 2 that are not used for a particular number and just begin with the highest power that *is* used and continue from there. In other words, leave out the unbroken line of zeroes at the left. In that case, the numbers can be represented as:

1 equals 1
10 equals 2
11 equals 3
100 equals 4
101 equals 5
110 equals 6
111 equals 7, and so on.

Any number at all can be expressed by some combination of 1's and 0's in this fashion, and a few primitive tribes have actually used a number system like this. The first civilized mathematician to work it out systematically, however, was Gottfried Wilhelm Leibniz about three centuries ago. He was amazed and gratified because he reasoned that 1, representing unity, was clearly a symbol for God, while 0 represented the nothingness which, aside from God, existed in the beginning. Therefore, if all numbers can be represented merely by the use of 1 and 0, surely this is the same as saying that God created the universe out of nothing.

Despite this awesome symbolism, this business of 1's and 0's made no impression whatsoever on practical men of affairs. It might be a fascinating mathematical curiosity, but no accountant is going to work with 1011011001 instead of 729.

But then it suddenly turned out that this two-based system of numbers (also called the "binary system" from the Latin word "binarius" meaning "two at a time") is ideal for electronic computers.

After all, the two different digits, 1 and 0, can be matched in the computer by the two different positions of a particular switch: "on" and "off." Let "on" represent 1 and "off"" represent 0. Then, if the machine contained ten switches, the number 1,023, could be indicated as on-on-on-on-on-on-on-on-on-on; the number 729 could be on-off-on-on-off-on-on-off-off-on; and the number 100 could be off-off-off-on-on-off-off-on-off-off.

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By adding more switches we can express any number we want simply by this on-off combination. It may seem complicated to us, but it is simplicity itself to the computer. In fact, no other conceivable system could be as simple—for the computer.

However, since we are only human beings, the question is: can *we* handle the two-based system? For instance, can we convert back and forth between two-based numbers and ordinary numbers? If we are shown 110001 in the two-based system, what does it mean in ordinary numbers?

Actually, this is not difficult. The two-based system uses powers of 2, starting at the extreme right with 2^0 and moving up a power at a time as we move leftward. So we can write 110001 with little numbers underneath to represent the exponents, thus $110001_{5\,4\,3\,2\,1\,0}$. Only the exponents under the 1's are used, so 110001 represents 2^5 plus 2^4 plus 2^0 or 32 plus 16 plus 1. In other words, 110001 in the two-based system is 49 in ordinary numbers.

Working the other way is even simpler. You can, if you wish, try to fit the powers of 2 into an ordinary number by hit and miss but you don't have to. There is a routine you can use which always works and I will describe it (though, if you will forgive me, I will not bother to explain *why* it works).

Suppose you wish to convert an ordinary number into the two-based system. You divide it by 2 and set the remainder to one side. (If the number is even, the remainder will be zero; if odd, it will be 1.) Working only with the whole-number portion of the quotient, you divide that by 2 again, and again set the remainder to one side and work only with the whole-number portion of the new quotient. When the whole-number portion of the quotient is reduced to 0 as a result of the repeated divisions by 2, you stop. The remainders, read backward, give the original number in the two-based system.

If this sounds complicated, it can be made simple enough by use of an example. Let's try 131:

131 divided by 2 is 65 with a remainder of 1
65 divided by 2 is 32 with a remainder of 1
32 divided by 2 is 16 with a remainder of 0
16 divided by 2 is 8 with a remainder of 0
8 divided by 2 is 4 with a remainder of 0
4 divided by 2 is 2 with a remainder of 0
2 divided by 2 is 1 with a remainder of 0
1 divided by 2 is 0 with a remainder of 1

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In the two-based system, then, 131 is written 10000011.

With a little practice anyone who knows fourth-grade arithmetic can switch back and forth between ordinary numbers and two-based numbers.

The two-based system has the added value that it makes the ordinary operations of arithmetic childishly simple. In using ordinary numbers, we spend several years in the early grades memorizing the fact that 9 plus 5 is 14, that 8 times 3 is 24 and so on.

In two-based numbers, however, the only digits involved are 1 and 0, so there are only four possible sums of digits taken two at a time: 0 plus 0, 1 plus 0, 0 plus 1 and 1 plus 1. The first three are just what one would expect in ordinary arithmetic:

0 plus 0 equals 0
1 plus 0 equals 1
0 plus 1 equals 1

The fourth sum involves a slight difference. In ordinary arithmetic 1 plus 1 is 2, but there is no digit like 2 in the two-based system. There 2 is represented as 10. Therefore:

1 plus 1 equals 10 (put down 0 and carry 1).

Imagine, then, how simple addition is in the two-based system. If you want to add 1001101 and 11001, the sum would look like this:

```
  1001101
    11001
  -------
  1100110
```

You can follow this easily from the addition table I've just given you, and by converting to ordinary numbers (as you ought also to be able to do) you will see that the addition is equivalent to 77 plus 25 equals 102.

It may seem to you that following the 1's and 0's is difficult indeed and that the ease of memorizing the rules of addition is more than made up for by the ease of losing track of the whole thing. This is true enough—for a human. In a computer, however, on-off switches are easily designed in such combinations as to make it possible for the on's and off's to follow the rules of addition in the two-based system. Computers don't get confused and surges of electrons bouncing this way and that add numbers by two-based addition in micro-seconds.

Of course (to get back to humans) if you want to add more than two numbers, you can always, at worst, break them up into groups of two.

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If you want to add 110, 101, 100, and 111, you can first add 110 and 101 to get 1011, then add 100 and 111 to get 1011, and finally add 1011 and 1011 to get 10110. (The last addition involves adding 1 plus 1 plus 1 as a result of carrying a 1 into a column which is already 1 plus 1. Well, 1 plus 1 is 10 and 10 plus 1 is 11, so 1 plus 1 plus 1 is 11.)

Multiplication in the two-based sytem is even simpler. Again, there are only four possible combinations: 0 times 0, 0 times 1, 1 times 0 and 1 times 1. Here, each multiplication in the two-based system is exactly as it would be in ordinary numbers. In other words:

0 times 0 is 0
0 times 1 is 0
1 times 0 is 0
1 times 1 is 1

To multiply 101 by 1101, we would have

```
   101
  1101
-------
   101
  000
 101
101
-------
1000001
```

In ordinary numbers, this is equivalent to saying 5 times 13 is 65. Again, the computer can be designed to manipulated the on's and off's of its switches to match the requirements of the two-based multiplication table—and to do it with blinding speed.

It is possible to have a number system based on powers of 3, also (a three-based or "ternary" system). The series of numbers: 3^0, 3^1, 3^2, 3^3, 3^4 and so on (that is: 1, 3, 9, 27, 81 and so on) can be used to express any finite number provided you are allowed to use up to two of each member of the series.

Thus 17 is 9 plus 3 plus 3 plus 1 plus 1, and 72 is 27 plus 27 plus 9 plus 9.

If you wanted to write the series of integers according to the three-based system, they would be: 1, 2, 10, 11, 12, 20, 21, 22, 100, 101, 102, 110, 111, 112, 120, 121, 122, 200, and so on.

You could have a four-based number system based on powers of 4, with each power used up to three times; a five-based number system

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based on powers of 5 with each power used up to four times; and so on.

To convert an ordinary number into any one of these other systems, you need only use a device similar to the one I have demonstrated for conversion into the two-based system. Where you repeatedly divide by 2 for the two-based system, you would repeatedly divide by 3 for the three-based system, by 4 for the four-based system and so on.

Thus, I have already converted the ordinary number 131 into 11000001 by dividing 131 repeatedly by 2 and using the remainders. Suppose we divide 131 repeatedly by 3 instead and make use of the remainders:

131 divided by 3 is 43 with a remainder of 2
43 divided by 3 is 14 with a remainder of 1
14 divided by 3 is 4 with a remainder of 2
4 divided by 3 is 1 with a remainder of 1
1 divided by 3 is 0 with a remainder of 1

The number 131 in the three-based system, then, is made up of the remainders, working from the bottom up, and is 11212.

In similar fashion, we can work out what 131 is in the four-based system, the five-based system and so on. Here is a little table to give you the values of 131 up through the nine-based system:

two-based system	11000001
three-based system	11212
four-based system	2003
five-based system	1011
six-based system	335
seven-based system	245
eight-based system	203
nine-based system	155

You can check these by working through the powers. In the nine-based system, 155 is 1.9^2 plus 5.9^1 plus 5.9^0. Since 9^2 is 81, 9^1 is 9 and 9^0 is 1, we have 81 plus 45 plus 5, or 131. In the six-based system, 335 is 3.6^2 plus 3.6^1 plus 5.6^0. Since 6^2 is 36, 6^1 is 6, and 6^0 is 1, we have 108 plus 18 plus 5 or 131. In the four-based system, 2003 is 2.4^3 plus 0.4^2 plus 0.4^1 plus 3.4^0, and since 4^3 is 64, 4^2 is 16, 4^1 is 4 and 4^0 is 1, we have 128 plus 0 plus 0 plus 3 or 131.

The others you can work out for yourself if you choose.

But is there any point to stopping at a nine-based system? Can there be a ten-based system? Well, suppose we write 131 in the ten-based system by dividing it through by tens:

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131 divided by 10 is 13 with a remainder of 1
13 divided by 10 is 1 with a remainder of 3
1 divided by 10 is 0 with a remainder of 1

And therefore 131 in the ten-based system is 131.

In other words, our ordinary numbers are simply the ten-based system, working on a series of powers of 10: 10^0, 10^1, 10^2, 10^3 and so on. The number 131 is equal to 1.10^2 plus 3.10^1 plus 1.10^0. Since 10^2 is 100, 10^1 is 10 and 10^0 is 1, this means we have 100 plus 30 plus 1, or 131.

There is nothing basic or fundamental about ordinary numbers then. They are based on the powers of 10 because we have ten fingers and counted on our fingers to begin with, but the powers of any other number will fulfill all the mathematical requirements.

Thus we can go on to an eleven-based system and a twelve-based system. Here, one difficulty arises. The number of digits (counting zero) that is required for any system is equal to the number used as base.

In the two-based system, we need two different digits, 0 and 1. In the three-based system, we need three different digits 0, 1 and 2. In the familiar ten-based system, we need, of course, ten different digits, 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

It follows, then, that in the eleven-based system we will need eleven different digits and in the twelve-based system twelve different digits. Let's write @ for the eleventh digit and # for the twelfth. In ordinary ten-based number @ is 10 and # is 11.

Thus 131 in the 11-based system is:

131 divided by 11 is 11 with a remainder of 10 (@)
11 divided by 11 is 1 with a remainder of 0
1 divided by 11 is 0 with a remainder of 1

so that 131 in the eleven-based system is 10@.

And in the 12-based system:

131 divided by 12is 10 with a remainder of 11 (#)
10 divided by 12 is 0 with a remainder of 10 (@)

so that 131 in the twelve-based system is @#.

And we can go up and up and up and have a 4,583-based system if we wanted (but with 4,583 different digits, counting the zero).

Now all the number-systems may be valid but which system is most convenient? As one goes to higher and higher bases, numbers become shorter and shorter. Though 131 is 11000001 in the two-based system, it is 131 in the ten-based system and @# in the twelve-based system. It moves from eight digits to three digits to two digits. In fact,

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in a 131-based system (and higher) it would be down to a single digit. In a way, this is increasingly convenient. Who needs long numbers?

However, the number of different digits used in constructing numbers goes up with the base and this is an increasing inconvenience. Somewhere there is an intermediate base in which the number of different digits isn't too high and the number of digits in the usual numbers we use isn't too great.

Naturally it would seem to us that the ten-based system is just right. Ten different digits to memorize doesn't seem too high a price to pay for using only four-digit combinations to make up any number under ten thousand.

Yet the twelve-based system has been touted now and then. Four-digit combinations in the twelve-based system will carry one up to a little over twenty thousand but that seems scarcely sufficient recompense for the task of learning to manipulate two extra digits. (Schoolchildren would have to learn such operations as @ plus 5 is 13 and # times 4 is 38.)

But here another point arises. When you deal with any number system, you tend to talk in round numbers: 10, 100, 1000 and so on. Well, 10 in the ten-based system is evenly divisible by 2 and 5 and that is all. On the other hand, 10 in the twelve-based system (which is equivalent to 12 in the ten-based system) is evenly divisible by 2, 3, 4 and 6. This means that a twelve-based system would be more adaptable to commercial transactions and, indeed, the twelve-based system is used every time things are sold in dozens and grosses for 12 is 10 and 144 is 100 in the twelve-based system.

In this age of computers, however, the attraction is toward a two-based system. And while a two-based system is an uncomfortable and unesthetic melange of 1's and 0's, there is a compromise possible.

A two-based system is closely related to an eight-based system for 1000 on the two-based system is equal to 10 on the eight-based system, or, if you'd rather, 2^3 equals 8^1. We could therefore set up a table as follows:

Two-based system	*Eight-based system*
000	0
001	1
010	2
011	3
100	4
101	5
110	6
111	7

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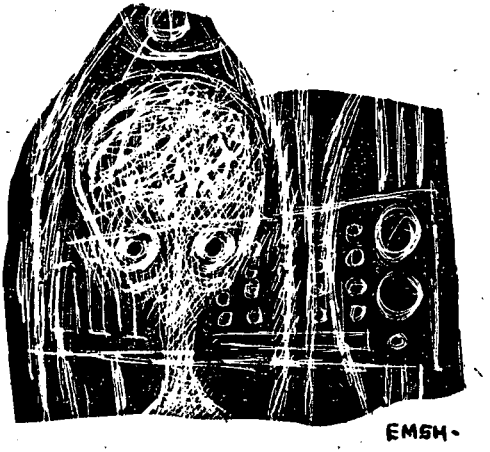
This would take care of *all* the digits (including zero) in the eight-based system and *all* the three-digit combinations (including 000) in the two-based system.

Therefore any two-based number could be broken up into groups of three digits (with zeroes added to the left if necessary) and converted into an eight-based number by using the table I've just given you. Thus, the two-based number 111001000010100110 could be broken up as 111,001,000,010,100,110 and written as the eight-based number, 710246. On the other hand, the eight-based number 33574 can be written as the two-based number 011011101111100 almost as fast as one can write once one learns the table.

In other words, if we switched from a ten-based system to an eight-based system, there would be a much greater understanding between ourselves and our machines and who knows how much faster science would progress.

Of course, such a switch isn't practical but just think—Suppose that, originally, primitive man had learned to count on his eight fingers only and had left out those two awkward and troublesome thumbs.



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Question: *Who is it that, at 42, has published 42 books, was for long the famous collaborator of the famous (and, alas, the late) Cyril Kornbluth, has been called "one of the finest satirists of the 20th Century," has number theory and star-gazing for hobbies, is running for Coroner of Monmouth County (N.J.), earned seven battle stars as an AAF weather-man in Italy during WW II, is a biographer of the Emperor Tiberius, is the favorite Science Fiction author of Kingsley Amis, is writing non-fiction books on the Ku Klux Klan and on sex-life in America today and on the Great Depression, and who is married to the comely Carol Pohl and lives in Red Bank (N.J.) with a houseful of handsome children?* Answer: *Who else but our esteemed colleague the Editor of GALAXY Magazine, Frederik Pohl. Here he turns aside—only temporarily, we hope—from fiction to make proposals which we suggest may well be of historical importance.*

ON BINARY DIGITS AND HUMAN HABITS

by Frederik Pohl

WHEN AN ASTRONOMER WANTS TO KNOW WHERE THE PLANET Neptune is going to be on July 4th, 2753 A.D., he can if he wishes spend the rest of his life working out sums on paper with pencil. Given good health and fast reflexes, he may live long enough to come up with the answer. But he is more likely to employ the services of an electronic computer, which—once properly programmed and set in motion—will click out the answer in a matter of hours. Meanwhile the astronomer can catch up on his gin rummy or, alternatively, start thinking about the next problem he wants to set the computer. It isn't only astronomers, of course, who let the electrons do their arithmetic. More and more, in industry, financial institutions, organs of government and nearly every

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area of life, computers are regularly used to supply quick answers to hard questions.

A big problem in facilitating this use, and one which costs computer-users many millions of dollars each year, is that computers are mostly adapted to a diet of binary numbers. The familiar decimal digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 which we use every day upset their digestions. They prefer simple binary digits, 0 and 1, no more. With them the computers can represent any finite quantity quite as unambiguously as we can with five times as many digits in the decimal scheme; what's more, they can "write" their two digits electronically by following such simple rules as, "A current flowing through here means 1; no current flowing through here means 0."

In practice, many computers are now equipped with automatic translators which, before anything else happens, convert the decimal information they are fed into the binary arithmetic they can digest. A few, even—clumsy brutes they are!—actually work directly with decimal numbers.

But intrinsically binary arithmetic has substantial advantages over decimal . . . once it is mastered! It is only because it has not been entirely easy to master it that we have been required to take the additional, otherwise unnecessary step of conversion.

The principal difficulty in binary arithmetic is in the appearance of the binary numbers themselves. They are homely, awkward and strange. They look like a string of stutters by an electric typewriter with a slipping key; and they pronounce only with difficulty. For example, the figure 11110101000 defies quick recognition by most humans, although most digital computers know it to be the sum of 2^{10} plus 2^9 plus 2^8 plus 2^7 plus 2^5 plus 2^3—i.e., in decimal notation, 1960.

To cope with this problem some workers have devised their own conventions of writing and pronouncing such numbers. A system in use at the Bell Telephone Laboratories would set off the above figure in groups of three digits:

11,110,101,000

and would then pronounce each group of three (or less) separately as its decimal equivalent. The first binary group, 11, is the equivalent of the decimal 3; the second, 110, of the decimal 6; the third, 101, of the decimal 5. (000 is zero in any notation.) The above would then be read, "Three, six, five, zero."

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Another suggestion, made by the writer, is to set off binary digits in groups of five and pronounce them according to the "dits" and "dahs" of Morse code, "dit" standing for 1 and "dah" for zero. Thus the date 1960 would be written

1;11101,01000

and pronounced, "Dit, didididahdit, dahdidahdahdah."

Obviously both of these proposals offer some advantages over the employment of no special system at all, i.e., writing the number as one unit and pronouncing it, "One one one one oh one oh one oh oh oh." Yet it seems, if only on heuristic principles, that conventions devised especially for binary notation might offer attractions. Such a convention would probably prove somewhat more difficult to learn than those, like the above, which employ features derived from other vocabularies. It might be so devised, however, that it could provide economy and a lessening of ambiguity.

One such convention has already been proposed by Joshua Stern of the National Bureau of Standards, who would set off binary numbers in groups of four—

111,1010,1000

and gives names to selected quantities, so that binary 10 would become "ap", 100 "bru", 1000 "cid", 1,0000 "dag" and, finally, 1,0000,0000 "hi". The only other names used in this system would be "one" for 1 and "zero" for 0, as in decimal notation. In this way the binary equivalent of 1960 would be read as, "bruaponehi, cidapdag, cid."

It will be seen that the Stern proposal has a built-in mnemonic aid, in that the new names are arranged alphabetically. "Ap" contains one zero, "bru" two zeroes, "cid" three zeroes and so on.

Such a proposal provides prospects of additions and refinements which could well approach those features of convenience some thousands of years of working with decimal notation have given us. Yet it may nevertheless be profitable to explore some of the other ways in which a suitable naming system can be constructed.

As a starting point, let us elect to write our binary numbers in double groups of three, set off by a comma after (more accurately, before)

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each pair of groups. Our binary representation of the decimal year 1960 then becomes

11,110,101,000

and we may proceed to a consideration of how to pronounce it. Taking one semi-group of three digits as the unit "root" of the number-word, we find that there are eight possible "roots" to be pronounced:

000
001
010
011
100
101
110
111

The full double group of six digits represents 8 x 8 or 64 possible cases. By assigning a pronunciation to each of the eight roots, and by affixing what other sounds may prove necessary as aids in pronunciation, we should then be able to construct a sixty-four word vocabulary with which we can pronounce any finite binary number.

The problem of pronunciation does not, of course, limit itself to the case of one worker reading results aloud to another. It has been suggested that we all, in some degree, subvocalize as we read. To see the word "cat" is to hear the sound of the word "cat" in the mind, and when the mind is not able instantly to produce an appropriate sound reading falters. (This point is one which probably needs no belaboring for any person who has ever attempted to learn a foreign language out of books.) Reading is, indeed, accompanied often by a faint mutter of the larynx which can be detected and amplified to recognizable speech.

Our first suggestion for pronunciation is that there is no need to assign *word* equivalents to each digit in binary notation, whether the words be "one" and "zero", "dit" and "dah" or any other sounds. We may if we choose regard each digit as a letter, and pronounce the word they construct as a unit in its own right—as, indeed, the written word "cat" is pronounced as a unit and not as "see, ay, tee."

Perhaps the adoption of vowel sounds for the digit 0 (if only be-

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cause 0 *looks* like a vowel) and consonant sounds for 1 will give us a starting point in this attempt.

A useful consonant would be one which takes different sounds as it is moved forward and backward in the mouth: "t" and "d" are one such group in English. We can then assign one of these values for the single 1, one for a double 1, etc.

Let us assign to the single 1 the sound "t" and to the double 1 the sound "d." Postponing for a moment the consideration of the triple 1, and representing the as yet unassigned vowel sounds of 0 by the neutral "uh," we can pronounce the first seven basic binary groups as follows:

000 (uh)
001 (uh) t
010 (uh) t (uh)
011 (uh) d
100 t (uh)
101 t (uh) t
110 d (uh)

The eighth case, 111, can be represented in various ways but, by and large, it seems reasonable to represent it by the sound "tee."

We now have phonemic representation of each of the eight possible cases, as follows:

Decimal	*Written binary*	*Pronounced binary*
0	000	uh
1	001	ut
2	010	uttuh
3	011	ud
4	100	tuh
5	101	tut
6	110	duh
7	111	tee

We can then continue to count, by compounding groups, ut-uh (001 000), ut-ut (001 001), ut-uttuh (001 010), etc. In this way the binary equivalent of the date 1960 might be read as "Ud-duh, tut-uh."

Conceivably such a system, spoken clearly and listened to with attention, might serve in some applications, but merely by applying sim-

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ilar principles in assigning variable vowel sounds to the digit 0 we can much improve it. One such series of sounds which suggests itself is the set belonging to the letter O itself: the single o as in "hot," the double o as in "cool," and, for the triple o, by the same substitution as in the case of "tee," the sound of the letter itself: "oh." Our first few groups then become:

Decimal	*Written binary*	*Pronounced binary*
0	000	Oh
1	001	Oot
2	010	Ahtah
3	011	Odd
4	100	Too
5	101	Tot
6	110	Dah
7	111	Tee
followed by		
8	001 000	Oot-oh
9	001 001	Oot-oot
10	001 010	Oot-ahtah

et cetera. Pronunceability has been somewhat improved, although we are still conscious of some lacks. The phonemic distinction between "ahtah" and, say, "odd-dah," the pronunciation of 011 110 is not great enough to be entirely satisfactory. At any rate, on the above principles our binary equivalent of 1960 is now pronounced, "odd-dah, tot-oh."

At this point we may introduce some new considerations. We have proceeded thus far on mainly logical grounds, but it is difficult to support the thesis that logic is the only, or even the principal, basis for constructing any sort of language. Irregularities and exceptions may in themselves be good things, as promoting recognition and lessening ambiguity. It may suffice to have only an approximate correlation between the symbols and the sounds they represent, as, indeed, it does in the written English language.

As the author feels an arbitrary choice of supplemental sounds will enhance recognition, he has taken certain personal liberties in their selection. The consonant L is added to "oh," making it "ohl"; all root-sounds beginning with a vowel are given a consonant prefix when they occur alone or as the second part of a compound word; certain addi-

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tional sounds are added at the end of the same roots when they occur as the first part of a compound word; "dah" becomes the diphthong "dye"; etc. The final list of pronunciations, then, becomes:

Binary quantity	*Pronunciation when in first group*	*Pronunciation when alone or in second group*
000	ohly	pohl
001	ooty	poot
010	ahtah	pahtah
011	oddy	pod
100	too	too
101	totter	tot
110	dye	dye
111	teeter	tee

Decimal 1960 is now in its binary conversion pronounced, "Oddy-dye, totter-pohl."

We may yet make one additional amendment to that pronunciation, however. The conventions of reading decimal notation aloud provide a further convenience for reading large numbers or for stating approximations. In a number such as

1,864,191,933,507

we customarily read "trillions," "billions," "millions," etc., despite the fact that there is no specific symbol calling for these words: We read them because we determine, by counting the number of three-digit groups, what the order of magnitude of the entire quantity is. The spoken phrase "two million" is a way of saying what we sometimes write as 2×10^6. In the above number we might say that it amounts to "nearly two trillion" (in America, at least), which would be equivalent to "nearly 2×10^{12}."

A similar convention for binary notation might well be merely to announce the number of groups (i.e., double groups of six digits) yet to come. An inconveniently long number might be improved in this way, a number such as 101 001, 111 011, 001 010,000 100 being read as "Totter-oot three groups, teeter-odd, ooty-pahtah, ohly-too." By the phrase "one group" we would understand that the quantity of the entire number is approximately the product of the number spoken before it times 2^6 or 64 (1,000 000). "Two groups" would indicate that

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the previous number was to be multiplied by 2^{12}, "three groups" by 2^{18}, etc. Or, in binary notation:

One group:	x $10^{1,000\ 000^{1}}$
Two groups:	x $10^{1,000\ 000^{10}}$
Three groups:	x $10^{1,000\ 000^{11}}$
Four groups:	x $10^{1,000\ 000^{100}}$

And so on, so that as we say, in round decimal numbers: "Oh, about three million," we might say in round binary numbers, "Oh, about ooty-poot three groups."

It may be considered that there is an impropriety in using a term borrowed from decimal notation to indicate binary magnitudes. Such an impropriety would not be entirely without precedent—the word "thousand," for example, etymologically related to "dozen," being an apparent decimal borrowing from a duodecimal system. In any event, as logic and propriety are not our chief considerations, we may reflect that the group-numbering will occur only when, sandwiched between binary terms, there will be small chance for confusion, and elect to retain it. With this final emendation our spoken term for the binary equivalent of 1960 becomes, "Oddy-dye one group, totter-pohl."

Let us now consider that we have achieved a satisfactory pronouncing system for binary numbers and take up the question of whether similar principles can lead us to a more compact and recognizable method of graphically representing these quantities. The numbing impact on the senses of even a fairly large number expressed in binary terms is well known. Although conventions for setting off groups and stating approximations, as outlined above, may be helpful, there would appear to be intrinsic opportunities for error in writing precise measurements, for example, in binary notation: One of the most common writing errors in numbering arises from transposing digits, and as binary numbers have in general about three times as many digits as their decimal equivalents, they can be assumed to furnish three times as many opportunities for error.

We have previously chosen to write binary numbers in double groups of three digits each. As each group represents eight possible cases we would, in the manner of the Bell workers, represent each group by its decimal equivalent, so that decimal 1960, which we have given as binary 011 110,101 000, could be written in some such fashion as

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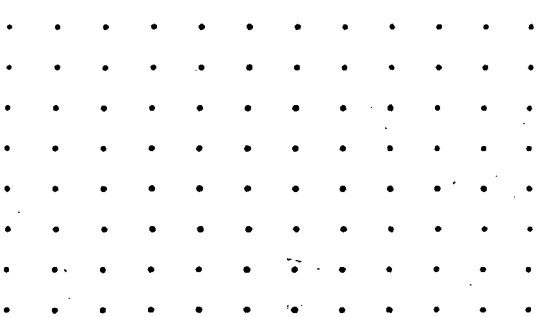
B36,50. Yet again we may hope to find advantages in a uniquely designed system for binary numbers.

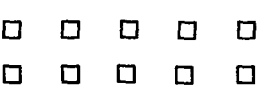
The author has experimented with a system which has little in common with notations intended for human use but some resemblance to records prepared for, or by, machines. For example, a rather rudimentary "reading" machine intended to grade school examinations or similar marked papers does so by taking note not of the symbol written but of its position on the paper—check marks, blacked-in squares, etc. An abacus, too, denotes quantities by in effect recording the position of the space between the beads at the top of the wire and the beads at the bottom.

Indeed, one such system might be designed after the model of the abacus, requiring the use of paper pre-printed with a design like this:



Each vertical column of eight dots can represent one three-digit group. To represent the binary equivalent of 1960, one would circle the fourth dot in the first column, the seventh dot in the second, the sixth dot in the third and the first dot in the fourth. The first dot in each column would represent 000, the second 001 and so on.

If we permit the use of preprinted paper, a more compact design might be a series of drawings of two squares, one above the other, thus:



Each pair of two squares is made up of eight lines. By assigning to each side of a square a value from 000 through 111, a simple check mark or dot would show the value for that group:

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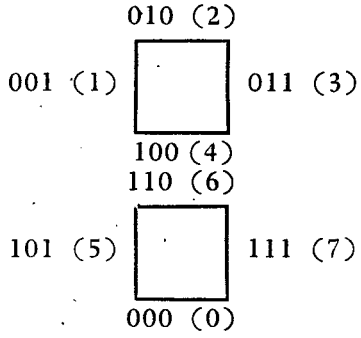
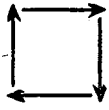


A vertical pair of squares in which the left-hand side of the lower square was checked would then show that the value 101, or 5, was recorded for that group.

Some readers will have remarked that the orderly system of representing the groups from 000 to 111 has been abandoned, the 000 group coming last in this representation. The reason for this is that we have a perfectly adequate symbol for a zero quantity already—that is, 0, which is unambiguous in numbering to almost all bases. (The sole exception is the monadic system, to the base 1. As this does not permit positional notation it does not require any zero.) Using the 0 symbol here does not, of course, fit in with our plan of checking off lines on squares, but this is itself only a way-station in the attempt to find a suitable notation which will not require the use of preprinted paper.

We might find such a notation by drawing the squares ourselves as needed, or at least drawing such parts of them as are required. For 001 we would have to show only the first line of the first square. For 010 we need two lines, the left-hand side and the top. For 011 we required three lines. At this point we begin to find the drawing of lines laborious and reflect that, as it is only the last line drawn which conveys the necessary information, we may be able to find a way of omitting the earlier ones. Can we do this?

We can if, for example, we explode the square and give it a clockwise indicated motion by means of arrowheads:



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Each arrow has a unique meaning. ↑ is always 001; ← is always 100. In order to distinguish the arrows of the first and second squares, we can run a short line through the arrows of the lower square; thus ↚ is 111, not 011. Having come this far, we discover that we are still carrying excess baggage; the shaft of the arrow is superfluous, the head alone will give us all the information we need. We are then able to draw up this table:

Decimal	*Binary, digital*	*Binary, graphic*
0	000	O
1	001	^
2	010	>
3	011	V
4	100	<
5	101	⅄
6	110	⅂
7	111	↚

and our binary equivalent for 1960 may be written as V⅂⅄O.

The writer does not suggest that in this discussion all problems have been solved and binary notation has been given all the flexibility and compactness of the decimal system. Even if this were so, the decimal system possesses many useful devices which have no parallel here—the distinction between cardinal and ordinal numbers, accepted conventions for pronouncing fractions, etc. It seems probable, however, that many nuisances found in conversion between binary and decimal systems can be alleviated by the application of principles such as these, and that, with relatively little difficulty, additional gains can be made—for example, by adapting existing computers to print and scan binary numbers in a graphic representation similar to the above. Indeed, it further seems only a short step to the spoken dictation to the computer of binary numbers and instructions, and spoken answers in return if desired; but as the author wishes not to confuse his present contribution with his prior publications in the field of science fiction he will defer such prospects to the examination of more academic minds.

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Decimal	*Binary, digital*	*Binary, graphic*	*Pronounced*
0	000	O	pohl
1	001	ʌ	poot
2	010	>	pahtah
3	011	V	pod
4	100	<	too
5	101	k	tot
6	110	⋟	dye
7	111	W	tee
8	001 000	ʌO	ooty-pohl
9	001 001	ʌʌ	ooty-poot
10	001 010	ʌ>	ooty-pahtah
11	001 011	ʌV	ooty-pod
12	001 100	ʌ<	ooty-too
13	001 101	ʌk	ooty-tot
14	001 110	ʌ⋟	ooty-dye
15	001 111	ʌW	ooty-tee
16	010 000	>O	ahtah-pohl
17	010 001	>ʌ	ahtah-poot
18	010 010	>>	ahtah-pahtah
19	010 011	>V	ahtah-pod
20	010 100	><	ahtah-too
30	011 110	V⋟	oddy-dye
40	101 000	kO	totter-pohl
50	110 010	⋟>	dye-pahtah
100	001,100 100	ʌ,<<	poot one group, too-too
1,000	001 111,101 000	ʌW,kO	ooty-tee one group totter-pohl
1,000,000	011,110 100,- 001 001,000 000	V,⋟<,ʌʌ,OO	pod three group dye-too ooty-poot ohly-pohl OR "Oh, about pod three groups."

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BOOKS

A FOR ANDROMEDA, Fred Hoyle and John Elliot, Harper & Brothers, $3.50

THE HIGH CRUSADE, Poul Anderson, Dolphin Books (Doubleday), 95¢

THE MATHEMATICAL MAGPIE, Clifton Fadiman, Simon and Schuster, $4.95

SHORTLY BEFORE THE LARGEST radio-telescope in the world is due for its official unveiling in the England of not many years in the future, the two chief assistants begin to perceive a patterned series of electrical impulses apparently emanating from somewhere in the constellation of Andromeda. John Fleming and Harvey Bridger become convinced—and convince Dr. Reinhart, their superior, and Judy Adamson, the installation's press officer—that the impulses constitute a "message" of sorts: one couched in binary numbers. Someone, or something, across that incredible distance of space and time, has been sending what seems to be a giant computer program, capable of being used by any race of sufficiently advanced scientific development.

"Galileo . . . and Copernicus . . . said 'Wham!' [declares Fleming] and knocked down all the railings and had to stand on their own feet in the middle of a great big open universe . . . People have put up new fences, further out. But this is another Renaissance! One day, when nobody's noticing, when everybody's talking about politics and football, and money . . . then suddenly every fence we know is going to get knocked down—*wham!* —like that!"

The details of the computer program are set forth in marvellously reasonable and convincing detail by the authors, and—so far as I can recall—with absolute originality. But almost everything

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that happens after that seems *déja vu*. The rest of the book is, at times, reminiscent of Siodmak's *Donovan's Brain*, of Oliver's *Shadows In The Sun*, of a dozen other novels of Science Fiction and suspense.

And yet, one goes on reading it, reading it willingly, reading it with pleasure.

The reason is, quite simply, that A FOR ANDROMEDA is a good novel.

Despite their failure of *Science Fictional* creativity, the authors remain creative *as writers*. True, the heavy menace (the heavy terrestrial menace, that is), an International Merchant, seems more reminiscent of Dr. Fu Manchu than—say—Axel Wenner-Gren: his daring and almost ubiquitous appearances on the edges of one security zone after another, his appearance and manner and even accent, seem rather too rich and oily and unlikely. But aside from this the characters are all both believable and interesting, and so are their actions—the weak and greedy Bridger, the care-nothing Fleming, the scientists and politicians and scientist-politicians, the young woman torn between duty and love (I must beg pardon for this last, but people *are* torn between duty and love, you know. All the damned time.) And Hoyle and Elliot show a truly commendable (if annoying) willingness to kill off their personalities when logic calls for it, regardless of other considerations.

All in all, with some regrets that it wasn't better, I must repeat: this is a good book. It is a successful book. It is, confound it, a *book*, not just a pulp story with electric brains chattering madly in the background. It has Science, Suspense, Love, Adventure, and Realism. Too bad it couldn't have (or didn't have) more Originality. But it is seldom that we get everything.

That visitors from outer space (and a confoundedly clumsy phrase "outer space" is! will no one devise a better one?) have come here before has often been conjectured—aerial phenomena observations of the sort collected by the gross, bale and *pood* and semi-collated by the late Charles Fort would seem to lend some color to the theory. What did the visitors do, once here? Merely observed, peacefully, and then departed? Very well—provided they *were* peaceful. But suppose they were not? Obviously they did not conquer us. The only alternative supposition is that we conquered them. And on this theory Poul Anderson has based THE HIGH CRUSADE.

It seems most unlikely—how could an expedition which must have been founded on a technology superior to any we yet have

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been overcome by us? Mr. Anderson gives himself a sporting handicap—he supposes the event to have occurred during the Middle Ages, when European science was at a low level indeed. It is a credit to his skill that he makes his story seem—if not likely—at least possible. His extraterrestrials have for so long been used to combat-at-distance, and with exceedingly powerful weapons, that they have lost all skill at close-in fighting, and, indeed, have almost no defenses against it.

Picture, then, an English baron, whose village is preparing to send off a contingent to help Edward III invade France—"Archers, crossbowmen, pikemen, and cavalry swarmed through the muddy streets, drinking, gaming, wenching, jesting, and quarreling, to the peril of their souls and our thatch-roofed cottages" —and down comes the Wesgor ship. Sir Roger de Tourneville and his men do not merely defeat the hostile Wesgor "demons" (as the aliens are believed to be), they capture the space ship and embark the whole village on—as they fondly imagine—an expedition to France. Not unsurprisingly, they wind up instead on a distant planet of the Wesgor system, where, presumably, they don't have the chance of a snowflake on a griddle. But this presumption is wrong. That Mr. Anderson (an incurable romantic with a firm grasp on the Laws of Thermodynamics) has written space opera here, cannot be denied. But it is *good* space opera and, while not everybody's cup of lapsong-soochong, is nevertheless a colorful and active and somehow believable adventure yarn; though the characters are all rather flat and conventional. Those who liked Leonard Wibberley's "The Mouse Who Roared" will like "The High Crusade"—and maybe some who didn't. The cover is a good one.

During the Thirties there was a radio (remember radio, you old-timers?) program called *Information Please* ("Time to stump the experts")—perhaps the first of the quiz programs. So far as I know, it was not fixed. Readers sent in questions to be answered by a panel consisting of *F. P. Adams*, John Kieran, and other savants; failing which answer the sender won an Encyclopedia. The only other quiz show offered cash, top prize: $64; consolation prizes were boxes of creamy, chewy caramels. How times have changed, eh, Virginia?

The urbane moderator of *Information Please* was Clifton Fadiman, who was for long the New Yorker's book reviewer. He gave way, I believe, to Edmund Wilson, who gave way to Brendan Gill, who gave way to Norman Podhoretz, who gave way. Mr. F.'s encomium to this Magazine is on its back cov-

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er, so perish forbid I should say a word against him, even though he is *a lover of mathematics*, something incomprehensible to me, who has been certified by a practising clinical psychologist as "mathematically a moron." Er—*I* was so certified. Not Mr. Fadiman.

You might assume that this would prevent me from reviewing the attractively-covered THE MATHEMATICAL MAGPIE; but you would be wrong. The gentleman publisher of The Magazine pays me monies to review books (regardless of covers), and these monies I intend to earn. Besides, although Mr. Fadiman, to my utter mystification, includes multitudes of items such as are comprehensible only to those whose minds have grasped the discipline of this harsh science and are familiar with its apparatus, he has also included ten science fiction stories which can be appreciated even by those who have but the most distant acquaintance with Polynomials in X.

Dr. Isaac Asimov writes of a future where computers have so thoroughly taken over the mathematical function that humans have not only forgotten how to cypher for themselves, they have forgotten that it was ever done. An eccentric genius type rediscovers the art—and is terrified by the use it is put to. Robert M. Coates contributes a short conceit of what happened when the Law of Averages failed to work, there is a mossy old piece by Miles J. Breuer, M.D., of Gernsback days, a story by Arthur C. Clarke, a Cleanth Penn Ransom diversion by H. Nearing, Jr., a better-than-average child prodigy tale of Mark Clifton's, a rather puzzling James Blish (equally puzzling is why Mr. Fadiman refers to Mr. Blish as "an English science-fictioneer"—to my certain knowledge, the Blish family has been American since the Administration of Governor Bradford), a disappointing effort of Richard Hughes's, and, winding up this section, another one by Arthur C. Clarke—better, to my taste, than the first.

Several of the stories have appeared in The Magazine, and the general effect is at least as good as the average SF anthology, particularly the average theme-centered one—the theme here being, of course, math.

In the other sections is an infuriating little item by Robert Graves, relating how a schoolmate, a math genius *in petto*, was ground into normalcy (I deliberately avoid the proper word, normality) by a brutal and ignorant teacher. Who knows in how many classrooms this same thing may be going on even today?—of how many geniuses the pedagogues have deprived us? There are funny pieces (essays, I'd guess you'd call them) by Corey Ford, Ste-

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phen Leacock, Max Beerbohm, and others; various rhymes, games, riddles, curious capers, musics, cartoons; and a statement by Bertrand Russell, from which I quote: *"I fear that, to a mind of sufficient intellectual power, the whole of mathematics would appear trivial, as trivial as the statement that a four-footed animal is an animal."*

OR ALL THE SEAS WITH OYSTER, Avram Davidson, Berkley, 50¢. A collection of short stories, most of which appeared in this Magazine.

CORRECTION: In reviewing Damon Knight's "A Century of Science Fiction" (Simon & Schuster) in the October issue, I said that his book of SF criticism, "In Search of Wonder," had been published by "spunky fannish little Avon." Avon may well be spunky, but it is neither little nor fannish. The name, of course, should have been ADVENT. Sorry. Sorry. Sorry.

A MAN NAMED THIN and other stories by DASHIELL HAMMETT

Eight tense and absorbing short stories by the champion of the American mystery are now available for the first time in book form. Each of these Hammett "unknowns" exhibits the unique and varied talents of the master of the detective short story, the creator of Sam Spade, Nick Charles, and the Continental Op. Introduction and editorial notes by Ellery Queen. Only 50¢.

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Sasha Gilien, whose delightful account of multiple-personality (and who else could be so delightful about neurosis?), TWO'S A CROWD, appeared in our July, 1962 number, is back with another brilliantly way-out story. It is one of several stories which we are presenting to you this year which deals with dreams—each of them too good to pass up. John Brunner observed modern scientific techniques of observing dreamers, Truman Capote meditated on a man who bought dreams and a woman who sold them, Robert J. Tilley will conjecture on dreaming and reality—and Sasha Gilien here goes on a wild (and yet beautifully controlled) flight of fancy on where and how (dream) fancy is bred. His Henry Parsons is in charge of the Symbols Division (Male), and, though a good Corporation Man, is also a True Artist.

AD INFINITUM

by Sasha Gilien

I NEVER UNDERSTOOD WHY I was assigned to supervise the Symbol Division (Male). To tell the truth, I don't even believe in all that Freudian stuff. But I suppose they recognize my abilities as an administrator, so that's where they put me. Actually, there's nothing to the work—every morning Miss Glabman comes down from Creative and Design with a list of things that are going to be needed that night, and I see to it that they're taken off the shelves and ready for routing to Production. It all has to be done by three in the afternoon, so my five-man crew has to hop sometimes, I can tell you, especially when Dressler makes out the list himself. He's crazy about symbols; pencils, pens, umbrellas, guns of all kinds, and of course, the Washington Monument all over the place. As soon as the list comes in, my boys go scooting in and out of the racks, gathering up the material for me to check off, and by two o'clock, the place is a madhouse. Some of the stuff can't be found, or one of the boys will break an item, the deadline gets closer, and everyone gets tense. But we always make it, and we're

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pretty proud of our section when I pick up the Achievement Certificate at the yearly Division Heads Banquet.

As far as my work goes, I don't have anything to complain about, and I do enjoy the prestige that goes with being a Division Head. On the other hand, the fact that I became an executive started all kinds of trouble between Ramona and me. We've been dating on and off for a couple of years now, and I guess you could say things are starting to get serious with us, but ever since my promotion she's been nagging me to get her transferred to the Erotic Division, specifically the Adolescent Boys (Nocturnal) Section. You see, Ramona does parts for older ladies. She plays those featureless salesgirls they argue with in markets, or maybe she's a fellow clubmember at a meeting, but mostly she's one of the crowd who laughs at them when they walk down the street naked. I'll admit it's pretty dull, but Nocturnals—a girl's got to be a real beauty, with a pneumatic figure to get parts like that. And Ramona, as much as I admire her, frankly, she's really more suited to what she's doing, and that's all there is to it.

"Henry," she keeps telling me, "you're in contact with Dressler every day. All I'm asking you to do is mention me. Just *mention* me. One word from Dressler and I could transfer in a minute."

"But Ramona, I never see Dressler. I just get lists from his office—I'm sure he doesn't even know what I look like."

She doesn't seem to understand that as head of Creative and Design, Dressler is so far above me that I'm dirt beneath his feet. After all, he is some kind of genius. He's responsible for plotting out all those situations, and every bit of it is quality material. Of course, he's hampered by the Front Office when he tries something that's too way out, but he's always experimenting. He tries to get away from the same old cliches where people are flying, or running away from a monster while their feet feel like lead; things like that. My only criticism of his work is that he goes in too much for heavy graveyard stuff instead of nice happy little stories. I couldn't see myself marching into his office trying to sell him on moving Ramona over to the sex department.

But Ramona, sweet as she is, knows how to nag. "Henry, I can't stand it anymore. Night after night, the same boring thing—those inane conversations I have to carry on; they don't even remember it the next morning. Why can't I do something exciting, like, you know, having someone make love to me, and then—"

"All right, Ramona, all right, I'll think about it."

So nag, nag, nag, until she fi-

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nally talked me into seeing Dressler. His secretary said he'd have some time free the following Thursday, and anyway he wanted to speak to the Symbols Supervisors, both (Male) and (Female) a special project he had in mind. Ramona was delighted when I told her about the appointment, and I must say it was a pleasure not hearing her complain about her work for a change.

Thursday, a few hours before deadline, I turned the whole warehouse over to Freddie, my assistant, and left for Dressler's office in C. and D. across the lot. I was a little worried about us being shorthanded for the afternoon, but I had confidence in my boys. Also, I was anxious to meet the new Female Symbols chief whom I hadn't met since she'd come in a few months before. It was strange walking through the plant during working hours; being stuck away in Symbols all this time, I guess I'd forgotten what was going on outside. Passing the Horror Compound, I saw the collection of dwarves, hunchbacks, and other twisted monstrosities quietly sitting around. Some were waiting for assignments, while those who had already gotten them were going over their lines and trying out new business. I happened to notice a large two-headed snake curled around one of the posts, and I made a mental note to find out why it wasn't in Male Symbols, where it belonged.

I hesitated when I got to Special Effects, and decided to stop off for a minute and say hello to Ed Freeman, the chief there. I hadn't seen him since the last banquet; Ed and I started out together in the old days, and he's a pretty big man now. As Special Effects Supervisor, he's almost up there with Dressler. It was Ed who perfected the falling sensation to where it's so realistic that quite a few people die from it every year, and he's a master of transition techniques—so that it seems perfectly natural to be at a cocktail party one minute and climbing Mt. Everest the next. He barely had time for a fast, "How are you, Henry?" when his phone started ringing, and his secretary reminded him of all the work he had piled up. We made a tentative appointment to have a drink one of these days, and I left.

I was really amazed at all the activity around the Color Process Building. I'd heard we were using more and more colors these days—not just for spectaculars, but even for little "B" run-of-the-mill jobs. Still, I was surprised at how that department had grown, which I guess accounts for the budget being what it is. I had to go a little out of my way to pass through the Erotic Division, which is one of the larger buildings on the lot, but after all, if my girl-friend Ramona thought she

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was going to work there, I had a perfect right to look around a little. And it's something to see, believe me. The girls they use are luscious, and they've all got that look of surrender, which makes the productions here probably the most popular in the business. They've got hundreds of girls who look like the big movie queens; Bardot, Monroe, and so forth. These last work mostly in Adolescent Boys (Nocturnal), and of course they've got it the easiest. All they have to do is stand around half-dressed, and it's usually all over before they have to do anything.

It's very quiet around Creative and Design. All the secretaries talk in hushed voices, and there's lots of thick carpeting and soundproof pastel walls, so the idea men can be free of any distraction. I saw Miss Glabman in the building, and I automatically lowered my voice to explain I had an appointment with the Great Man in a few minutes. It's all pretty magnificent, I can tell you, especially Dressler's office, which looks like it's made of solid marble.

His secretary had a phoney smile on her face when she told me that Mr. Dressler was awfully sorry, but he had to be in a story conference, and would I mind coming back next Wednesday when he'd definitely see me. I was pretty bothered by the whole thing, especially since my leaving the warehouse had probably upset the whole day's operation. And then there was Ramona—she'd start hounding me all over again. I wasn't the only one who was disappointed, though. Just as I was leaving, a stocky well-built woman about my age walked in and got the same story. It was Flora Prinzmetal, Female Symbols Chief, and I could tell she was extremely annoyed. When we were both out in the hall, I introduced myself, and we took to each other right away. I liked her no-nonsense air, and her right-to-the-point kind of thinking.

"Let's stop at the commissary for a cup of coffee," she suggested. "I think we deserve it after being stood up by Mr. Dressler. And besides, I've been wanting to meet you."

I decided a few more minutes out wouldn't make much difference, though I hoped Freddie had everything under control. Over coffee we had a wonderful discussion; we both had the same kind of problems in our work, though I must say that Flora had some creative ideas of her own. She wasn't happy just checking out her inventory of shoes, houses, boxes, and the other stock female stuff; she wanted to see symbols used more effectively.

"Henry, you've got a pretty good collection of trains over at your place, don't you?"

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Pretty good? I had a great collection—long streamlined jobs that seemed to slither along the rails, old black Civil War jobs that chugged and strained as they tried to climb hills, all kinds. In fact, I always felt that Dressler and his brain trust never made enough use of the train as a symbol.

"Well," she continued, "I've got some really fabulous tunnels over at Female, and one of these days I'd like to see them use one of your crack streamliners going into one of my tunnels. It's going very fast, you see, and then—*it explodes in the tunnel!* How about that for using symbols?"

It sounded good to me, but after all, it wasn't our job to provide the ideas; all we were supposed to do was see that the right symbol got to the right place at the right time. I glanced up at the clock and saw that it was almost deadline, and I started to get a little apprehensive, so we finished our coffee and went back to our offices. Before we parted, though, Flora asked me if I would like to come to her place for dinner some evening, and I said I would, since Ramona works nights anyhow.

It's lucky I got back when I did, because they were having a hassle about finding a misplaced steeple. It was for a girl to cling to while the waters of a flood were rising and drowning everyone else around. I remembered using one for the same situation a few months ago—incidentally, that was one of Dressler's ideas—and I picked it right out. It was a little bent, but a few knocks with a hammer straightened it, and when three o'clock came around, we had everything in order, ready to go.

Ramona was waiting for me when I finished work, and I had to tell her I didn't see Dressler. For some reason, she acted as if it were my fault he didn't show up, and she started complaining all over again. "Henry, you just don't give a damn about my career, or if I ever get a chance to use my real talent. Tonight it's another crowd chasing some poor old woman who thinks she stole something from Macy's. You don't know how sick I get sometimes, sick of the whole thing."

I sympathized with her and told her I'd talk to Dressler on Wednesday, but she was so upset she told me never mind, she'd talk to him herself. Poor kid, she had as much chance of getting in to see Dressler as she had appearing nude in a sex episode. She was just too lanky and, well—homely.

I didn't see her for the rest of the week, and on Tuesday night I went over to Flora's. She'd prepared a wonderful dinner, and after we finished it, we sat around and talked shop. She insisted that the automobile belonged in her section because you could open it

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and go inside, but I pointed out, and rightly so, I think, that the shape of it, especially the new cars, absolutely placed it in the male department. And of course we talked about Dressler and some of his screwball ideas. It was the big joke around the lot about his passion for detail. To him, detail was more important than anything else to add that touch of reality which marked all his work. All his productions were packed with close-ups of people doing the most trivial things. It was when Flora asked me if I'd heard about his latest notion that I got the surprise of my life. He was deliberately using skinny, unattractive women for the new erotic productions; some kind of sophisticated avant-garde idea he had. He'd tried it out with a Ramona somebody, and they ate it up, even the young boys.

"Not Ramona Pendergast by an chance?" I asked.

"That's right, Ramona Pendergast. Of course they don't use any symbols in these sex jobs, but one of my assistants happens to know her, and she was telling me about it."

So that's why I hadn't heard from Ramona all week. She'd actually bull-dozed her way in to Dressler and sold him a bill of goods. I had to admire her, and I certainly was glad for her, but I figured we wouldn't be seeing much of each other anymore. Which was all right with me; I never really thought we had too much in common, and now that I'd met Flora, I guess it was all for the best. In fact, when I left that evening, I kissed Flora goodnight, and planned to pick her up at the office the next day, so we could go into see Dressler together.

Wednesday afternoon I left very explicit instructions with Freddie, because I didn't expect to be back that day, and I picked up Flora a little after one. We went directly to Creative and Design, both wondering exactly what Dressler wanted to speak to us about. His secretary ushered us into the big conference room, gesturing for us to be quiet as we entered. The heads of all the departments were sitting on the soft leather couches, and Dressler was pacing up and down, enthusiastically explaining something to them. When he saw us he stopped and looked a little puzzled. His secretary whispered something to him, and he flashed us a big smile and said, "Ah, the Symbols people. Good to have you aboard. You know everybody, don't you?"

We nodded to everyone and sat down. Dressler continued, "As I was saying, I'm going to need the complete cooperation of all Department Heads on this project, which I think is revolutionary in concept. It will be the biggest thing we've ever done." He looked

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over at Flora and me. "I've been explaining it to the others, and I hate to repeat myself, but for the benefit of you Symbols people, I'll go over the outline again."

I felt a little uncomfortable about making all the others have to listen to the whole thing over again, but I think that Dressler liked to hear himself talk anyway, so I put an expression of intense concentration on my face and settled back.

"For one thing, I want to get away from doing just episodes and fragments, the way we've been doing for God knows how many years now. There's no reason in the world why we can't put an *entire life,* from birth to death, in a single dream!"

He must have noticed the involuntary look of doubt which crossed my face, because he looked right at me and said, "The time element doesn't matter; the whole thing takes a split second, anyhow. We can put in everything, every little detail. It means a lot of work for everybody, of course, and I don't even know if the Front Office will let me do it but I'd like to give it a try. What do you think—what was your name again?"

"Parsons. Henry Parsons. Well, Mr. Dressler, I really don't know. You mean a whole life, with every single little act that this person ever—?"

"Right. You've got a good grasp of it, Parsons. I mean everything. Every feeling this person ever had, everything that ever happened to him, everyone he ever came into contact with—a complete and total life, and all of it in one night's dream. It can be done. I know it."

It was very quiet in the room; none of us knew quite what to say. When you came down to it, though, we had all the facilities for doing it, and as he'd said, the actual running time was going to be only a second or two. But the scope—all those millions of details. It was staggering.

Dressler frowned at us and went on. "Well, that's basically it. Now I want to get back to the particular life I was talking about. Let's see, I roughed out his early childhood and youth—the usual schooling, some sickness, maybe a hot love affair or two." He paused. "And now, from this moment, here's where we turn it into a nightmare, something really hideous. I want the horror to begin just as our person puts down a magazine he's been reading. He's just finished a story called "Ad Infinitum." It's about a little man who has a job as Supervisor . . ."

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Introduction to Gordon R. Dickson's ROOFS OF SILVER

In writing about Gordon R. (for Rupert) Dickson the Man one may as well mention some trivial facts, such as that he was born in Canada of an American-born mother and an Australian-born father in 1923 (a vintage year), moved to the United States when he was 13 (thus, finally, in a manner of speaking, taking sides in the American Revolution, ancestors of his having been both Loyal and Rebel), attended and graduated the University of Minnesota—with four years out for Army service in WW II—having majored in creative writing, has been writing full time since 1950, is one of the very few writers living exclusively from SF, and lives in Minneapolis. Then one might go on to mention that he is in the six-foot range, height-wise, has blue eyes which seem constantly and mildly astonished, an impertinent nose, and curly, light-brown hair; a sweet disposition, a vast repertory of Scotch and other ballads, a skilled several fingers on the guitar, a hollow leg (for Scotch and other liquors), and is one of the lives and souls of the annual Milford (Penn.) Science Fiction Writers Conference. His first story in F&SF was LISTEN (Aug., 1952); his most recent one, NAPOLEON'S SKULL-CAP (May, 1962). He has published a number of novels, one of which, NAKED TO THE STARS, was serialized here in 1961 (Oct. and Nov.). His latest, NECROMANCER, published by Doubleday in April, he describes as "the second of the DORSAI—NECROMANCER—CHILDE group of three novels which when complete will present an allegorical argument in favor of present-day man's eventual moral evolution into a more responsible and therefore more productive being," and will eventually form part of a nine-novel series (three historical, three contemporary). This being the case, one may understand Gordy Dickson's statement that he is "purposed up to the ears." If ROOFS OF SILVER will form part of this, we do not know, but its moral purpose is as clear

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as its story is vivid. The agents of a superior civilization (was it?) watching and judging the decaying local culture (was it?) which tried to protect itself from the brutal and ignorant wild men (were they?), while only one man knew what was wrong (but did he?) . . .

ROOFS OF SILVER

by Gordon R. Dickson

"BECAUSE YOU'RE A FOOL, brother," said Moran.

The words hung on the hot air between them. A small breeze blew through the rectangular window-aperture in the thick mud wall to the rear. Through the window could be seen a bit of a garden, a few blue mountain flowers, anl the courtyard wall of mud. The breeze disturbed the air but did not cool the room. In an opposite wall, the hide curtain did not quite cover the doorway. The curtain's much-handled edge was scalloped and worn thin. Hot sunlight from the square came through the gap. Beasts like Earth donkeys, with unnatural-looking splayed hooves drowsed around the fountain in the center of the square.

"Why don't you call me a donkey?" said Jabe, looking at them.

"Fair enough," said Moran. He sat, gowned and fat among his grain sacks, his slate balanced on his knees, his creased fingers of both hand white with chalk. "Because it's just what you aren't. Any more than those variforms out there are, no matter what they're called."

Jabe moved uneasily. His spurs clinked.

"You think I'm overadapted?" he said.

"No. You're just a fool," said Moran. "As I said and keep saying. You've been here ten years. You started out a liberal and you've become conservative. When you started to work with these settlers, the returns weren't in yet."

"It's not a hundred per cent," said Jabe.

"How can it be?" said Moran. "But what's a statistical chance of error of three per cent?"

"I can't believe it," said Jabe. "I might have believed it, back on Earth, when these people were just population figures to me. Now, I've lived with them ten years. I can't believe it."

"I've lived with them, too."

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"Eight years," said Jabe.

"Long enough. I didn't marry into them, though. That's why my eyes are still clear."

"No," said Jabe. He beat his hands together softly with a curious rhythmic and measured motion until he became suddenly aware of Moran's eyes upon them, and checked their motion, guiltily.

"No," he said again, with an effort. "It can't be true. It must be sociological."

"Indigenous."

"I can't believe that," said Jabe.

"You aren't arguing with me, man," said Moran. "You're arguing with a ten year survey. I showed you the report. It's not a matter of living conditions or local superstitions. It's a steady progressive deterioration from generation to generation. Already the shift is on from conscience to taboo."

"I haven't seen it."

"You've got a single point of view. And a technologically high-level of community at that mine."

"No," said Jabe, shifting his weight from one foot to the other, and looking down at Moran. "Report or no report, I'm not condemning a world full of human beings."

Moran sat heavily among the grain sacks.

"Who's condemning?" he said. "It's just quarantine for the present; and you and I and the rest of the agents have to go back."

"You could hold up the report."

"No," said Moran. "You know better than that."

"It could be stolen. The agent bringing it to you could have been knifed."

"No. No," said Moran. "The report goes in." He looked with a twist of anger on his face at Jabe. "Don't you think I feel for them? I've been here almost as long as you have. It's just quarantine for a time—fifty years, maybe."

"And after the fifty years runs out?"

"We'll figure out something in that much time."

"No," said Jabe. "No more than they did on Astarte, or on Hope. They'll sterilize."

"Rather than let them breed back down into the animal."

"There's no danger of that here, I tell you," said Jabe.

"Report says there is," said Moran. "I'm sending it in. It has to be done."

"Earth has to protect Earth, you mean."

Moran sighed heavily.

"All right," he said. "I'm through talking about it. You get yourself ready to leave, along with the other agents—though if you take my advice, the kindest thing you can do for that wife of yours is to leave right now, just vanish."

"I don't think I'll go," said Jabe. "No." His spurs clinked again. "I'm not leaving."

"I haven't any more time to

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waste with you," said Moran. He twisted around and pulled one of the grain sacks out of position. Behind it was revealed a black board with several buttons and dials upon it. He pressed a button and turned a dial. He spoke to the board.

"Survey ship? I've got an agent here who—"

Jabe leaned down and forward, and struck. Moran choked off in mid sentence and stiffened up. His fat arm came back and up, groping for the knife hilt standing out between his shoulder blades. Then he fell forward, half covering the black board.

"Moran?" said the board in a small, buzzing voice. ". . . Moran? Come in, Moran. . . ."

Two hours later, out on the desert with Alden Mann who had come into the city with him to buy medicines for the mine, Jabe stopped automatically to rest the horses; and Alden drew up level with him.

"Something on your mind, Jabe Halvorsen?" said Alden.

"Nothing," said Jabe. "No, nothing." He looked into Alden's frank, younger face, made himself smile, and went back to staring out past Alden at the sherry-colored, wavering distance of the hot sandy plain. Behind him, to the right of their road was the edge of the cultivated area with palmlike trees about thirty feet high.

"Let me know, if," said Alden, cheerfully, got out his pipe and began to fill it, throwing one leg over his saddlehorn. The spur below the floppy leather pantleg flashed the sun for a moment in Jabe's eyes.

"If, I will," answered Jabe automatically. Alden, he thought, was the closest thing to an actual friend that he had. Moran he had known for a long time, but they had not really been close. They had been relatives in a foreign land.

Jabe lit his own pipe. He did not feel guilt, only a hollow sick feeling over the killing of Moran. Over the necessity of his killing Moran. He thought there would be no immediate danger from it. The knife was a city knife he had bought there an hour before for the purpose. He had worn gloves. He had taken Moran's purse, the report and nothing else. The Survey Ship would not be able to identify him as the murderer and send men to arrest him in much less than three months. He should be able to do something in three months. If he did, after that, nothing mattered.

It was good that he had suspected the report's coming. He puffed on his pipe, staring at the sandy distance. He knew where they had gone wrong. But Moran was proof of the fact that argument would be useless. They wanted something concrete.

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"I was wild out here, once," said Jabe, to Alden.

"Yeah," Alden glanced at him, with some sympathy. "Nobody holds it against you, any more."

"I still don't belong."

"For me, you do. And for Shiela." Alden blew smoke at him. "When your son's born he'll have a place on the staff of the mine."

"Yes," said Jabe. His thoughts veered. "You people never had much to do with the wild ones."

"Oh, we shoot a few every year."

"Did you ever keep any for a while? Just to get a notion of what makes them tick?"

"No," said Allen. "We're miners with work to do. If one get's caught, he's hung; and we're back on the job in an hour."

"You didn't hang me."

"That was different," said Alden. "You came in with that trader's packtrain; and when it was time to leave Shiela spoke for you."

"You didn't maybe take me for a trader crewman, myself?"

"Oh no," said Alden. "We knew. You can tell, a wild one."

"I'm surprised," said Jabe, a little sadly, "you'd want to risk it."

"If Shiela spoke for you—" Alden shrugged. He stared at Jabe. "What got you thinking of wild ones?"

"Nothing," said Jabe. "The sand, I guess."

It was not true, of course. What had started him was the knowledge of his advantage over Moran and the rest. All the other agents on this world had played one role, one character. By chance of luck, or fate, it had fallen on him to play two. He had not meant to be taken up by the community around the silver mine back in the mountains. It had merely happened. Love had happened—to himself as well as Shiela. And the Survey Ship, concerned only with its routine hundred-year check on this planetful of emigrants from old Earth, had okayed his change of status.

The result, he thought now, as the smoke of the pipe came hot from low in the bowl of it, almost burned out, was that he had two points of view where Moran and the rest had one. Two eyes instead of one, binocular vision instead of the one-dimensional view a single seeing organ could achieve. There was a recessive strain cropping up on this world, all right; but it was carried and spread by the wild ones—the degenerate individuals that had neither clan nor community to uphold them.

And the check to it, he was sure, was right in his own adopting community. The tight-held social unit of the mine-people, who had preserved their purity of strain by keeping the degenerates killed off and at a distance. There was no doubt in his mind that if he had been actually a wild one, Shiela would never have been attracted to him, or he to her. It was

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because though she did not know it, he was unalloyed with the spreading degeneracy of this world—as she herself was pure, untainted silver like that the mine refinery turned out of the common, mingled ore of the mountains—that she had demanded him of the trader.

He knocked his pipe out on his boot. And there was the answer, he thought. A natural tendency to breed for the best that was a counter-force to what Moran and the others had discovered. In the long run, the superior, pure breed would kill off the degenerates. All he had to do was prove it to the Survey Ship.

Only, for that he needed a specimen of each type. One of the miner people would not be hard to come by. But he would need one of the wild ones as well. After that, it was up to the testing facilities of the Survey Ship to monitor and make findings. But the findings could only substantiate what he already knew.

And that was the important thing. For himself, he had burnt his bridges with the knife he had driven into Moran. But Shiela and his unborn son would be safe.

"Let's get on," he said to Alden. Alden knocked out his own pipe and the two horses went forward once more. The gait of their wide hoofs—not splayed so badly as were the hooves of the donkeys but spread for the sand as camel hooves are spread—was smooth. Jabe wondered how it could be done—attracting one of the wild ones. He and Alden would be passing through wild territory in the early part of the mountains. But bait was needed.

After a while a thought came to him. He reached down and unhooked one of the large silver buckles from his boot. Alden, riding a little ahead, did not notice. As they rode on, Jabe set himself to rubbing the buckle to a high shine on the pant's leg hidden from Alden by the horse's bulk.

When they saw the first low crests of the mountains rising ahead of them, Jabe stuck the buckle into the headband of his wide-brimmed hat—on the side away from Alden.

When darkness came, they camped. They were only a few hours from the mine; but they were deep in the mountains. In a little shallow opening in the rocks, all but clear of scrub variform pine and native bush, they lit a fire, and ate. Alden rolled himself early in his blankets; but Jabe sat up, feeding the fire and frowning into its licking flames.

He had not even reached for the chunk of dead limb, an hour or so later. He had only thought about it—his hand had not yet moved—but some preliminary tensing of the body must have given him away, because the

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voice, dry as the desert wind that had followed them all through the day, whispered suddenly in his ear.

"Don't move, mister."

He did not move. His rifle was lying across his spread knees, its trigger guard scant inches from his right index finger, but the whisper had come from the dark immediately behind him; and a thrown knife takes very little time to cover the distance a whisper can carry, even in the stillness of a mountain night. He glanced past the flames of the fire to where the dim shape of the blanket-wrapped body of Alden lay like a long, dark log against the further rim of darkness. But whether Alden slept or waked, whether he had heard the whisper or not, the young miner gave no sign of being aware of what was happening.

"Reach out with your right arm. Slow," said the whisperer. "Fill me a cup of that coffee and hand it back. And don't you turn, mister."

Jabe moved slowly as he had been told. The last word had been pronounced *turun*. The accentual difference from the speech of Alden announced a wild one, one of the groupless wandering savages roaming about the desertel lands. The speaker behind Jabe—was he a man, or a woman?—used his words like a child, with sing-song cadences.

Slowly and steadily, Jabe passed back the full cup without turning. He felt it taken from him and heard the soft noise of drinking.

"Fill again, mister." The cup was sitting again, empty, at his side. "Fill yourself, too."

Jabe obeyed.

"What do you want?" he asked, when he had his own hot, full cup between his hands. He stared into the flames, waiting for the answer.

"Some things. That silver dothing in your hat. Some talk. You riders from that mine town?"

"Yes," said Jabe. He had been easing his hand, a millimeter at a time toward the rifle on his knees. He found himself whispering his answer. If Alden still slumbered, so much the better. The rifle on his knees was like any that the mine people carried, but there was an anesthetic cartridge in its chamber now instead of an ordinary shell.

"It's them goats, you're after?"

"Goats?" said Jabe. The community of the mine kept goats for hide and meat. He had been set to guarding some himself in the beginning, before his marriage ceremony with Shiela. Usually the old people watched them. "Some strays?"

"They aren't not strays," came back the answer. "One's eat and the other two butchered ready to eat. They's mine now."

"You stole them."

"Was you never hungry, mister?"

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"Yes," said Jabe. "I was wild once, myself."

He sat waiting for the response to that. It was one of the things he had hoped would help. In addition to the bullet that was not a bullet in his gun, there were other things that belonged to him as an agent. There was a match box in his pocket that was not a match box, but an emotional response recorder. A moment's cooperation, a moment's relaxation from the wild one behind him was all that he needed. A chance to bring the rifle to bear. And meanwhile, the recorder was running. He had started it the minute Alden had rolled up and turned away in his blankets.

"Then you know," said the whisperer. "You know it, then." There was a moment of pause. "It's rich you is, down there at that mine. I seen the pack trains come and go. I seen the goats. And I seen you all down there, all rich with silver."

"The silver," said Jabe, "you like the silver?"

"Mighty rich, you is. All that silver."

"We have to mine for it," said Jabe. "We have to make it." He could not feel the recorder in his pocket, but he knew it was there, taking down the colors of the wild one's responses. "It isn't just there to be picked up."

"Yeah," there was something almost like a whispery chuckle behind him. "I found her so, watching. I couldn't walk down in through your gates, not me. But I took t'myself a high place and watched—all day, the fire going in the tall building and the bright silver things about the town. And the women with silver on them, so that they shine here and there in the sun, coming and going down there tween the houses. And the houses, all the big ones and the little ones with roofs of silver."

"Roofs—?" said Jabe; and then to his mind's eye came a picture of the corrugated metal sheathing—dating indestructibly back over a hundred years to the first coming of the settlers to this world, and the first establishment of the mine. "But they're—"

"What, mister?"

"Part of the buildings," said Jabe, "that's all—"

A whispery laugh sounded in his ear.

"Don't fear, mister. I tell you something. If it were me comin in with horses and men to take all you got, I wouldn't let nobody touch them roofs, but leave them there, for the sun to shine on. I never seen nothing so fine, so fine anywhere, as them roofs of silver all to-shine in the sun." The whisper changed a little in tone, suddenly. "You feel that way too, don't you, Mister?"

"Yes," said Jabe, out of a suddenly dry throat. "Oh, yes. The roofs—the roofs, all silver."

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"I tell you what," said the whisperer. "I take this from your hat —" Jabe felt the buckle lightly plucked from his hatband. "And I got some other little silver bits from your saddles. But I want you to know, I'm to-make me little houses and roof them houses with the silver, just like yours, and come day put them out for the sun to bright-shine on. So you know your silver, it in the sun."

"Good," said Jabe, whispering. His throat was still dry.

"And now mister—don't move —" said the voice from behind him, "I got to—"

The whispered words ceased suddenly. Caught in a sudden cold ecstasy of fear, Jabe sat frozen, the breath barely trickling in and out of his throat. *For Shiela,* he prayed internally, *for all of them at the mine—not now. Don't let me be killed now* . . . The long seconds bled away into silence. Then, a far shout broke the plaster cast of his tension.

"Alden! Jabe! Coming up!"

In one motion, Jabe snatched up his rifle and whirled, to face the darkness beyond the firelight behind him. But it hung there before him emptily. And even as he relaxed and turned away from it, there rode up from the other side of the fire, three of the mine men on nervous horses, their rifle barrels gleaming in the light of the fire.

"We were after a goat lifter; and the hounds started baying off this way. We rode over from our camp," said Jeff Connel, the assay engineer, as he led the way in. His long dark face gleamed under grey hair as he looked down into Jabe's face. "What's the matter with Alden, sleeping like that?"

"Alden!" Jabe turned and stepped over the fire to shake his friend out of his blankets. Alden rolled over at the first touch, his head lolling backward.

His throat had been neatly cut.

Their return to the mine with Alden's body took place in silence. Jabe rode in their midst, aware of their attitude, whether right or wrong. When two men went out from the mine together on a journey, one was responsible for the other, no matter what the circumstances. He could accept that; it was part of their customs. But what touched him with coldness now was the fact that he seemed to feel suspicion in them. Suspicion of the fact that it had been him who lived, while Alden was murdered.

That suspicion might block his chance of getting a clean recording from one of them to place in comparison with the recording he had made of the wild one. And the recording was all he had, now. Back by the fire, he had been full of hope. If he could have captured the wild one and compared his recording with Alden's when

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he awoke Alden to tell him of the capture. . . . But there had never been any hope of waking Alden.

Still, there was a sort of chill hope in him. He did have the recording he had made. And he had himself to make a recording of, for control purposes. It was not impossible, it was still quite possible, that he could get a parallel recording yet from one another of the mine people. It was a field sort of expedient, but the Survey Ship could not ignore it. If they were faced with three recordings of responses to parallel situations, and there was an identity between the two belonging to Jabe and one of the mine people, and a variance between those two and the wild one, they would have to check further.

With luck, they would send down assistance to capture at least one miner and one savage and take them, drugged, to the ship for full tests. And then. . . .

The sad caravan carrying Alden's body had wound its way through the mine streets picking up a cortege of women and children following, for the available men were out on the hunt as the three who had come on Jabe and Alden had been. At the mine manager's house they stopped, brought in the body of Alden and told their story. Lenkhart, the mine manager, stood with his grey eyes in a bearded face, watching Jabe as they talked. But he said nothing in blame—if nothing in comfort. He beat his hands together with a curious rhythmic and measured motion; and dismissed them to their homes.

Shiela was kinder.

"Jabe!" she said; and held him, back at last in the privacy and safety of their own home. "It might have been you, killed!"

"I know," he said. He sat down wearily. "But it was Alden."

"Oh, that animal!" said Shiela with sudden violence. "That *animal!* They ought to burn him at the pass and leave him there as a warning to the rest!"

He felt a certain sense of shock.

"Shiela," he said. She looked at him. She was a slim, tall girl with heavy, black hair. Under that hair her eyes seemed darker, in this moment, than he had ever seen them before, and almost feverish. "He didn't burn Alden. Alden probably never even woke up."

"But he's an animal—a wild animal!" she said again. "If he is a man, that is.—It might be one of those horrible women. Was it a woman, Jabe?"

He caught a new note of hatred in the new question, the thought that it might have been a woman. He had never seen her like this—he had not known she could be so dangerous where things close to her were concerned. He thought of the child she was carrying and a little fear came for a moment into the back of his mind.

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"I don't think so. No," he said. He felt the lie like a heavy weight on him. For it had been impossible to tell the sex of the whisperer. Weariness swept over him like a smothering wave. "Let's go to bed."

In the obscurity and privacy of their bed, later, she held him tightly.

"They'll get him tomorrow," she whispered. And she was fiercely loving. Later, much later, when he was sure that she slept heavily, he rose quietly in the dark and went into the living room-dining room of their three room cottage, and extracting the recorded strip from the imitation of a match box, processed it. In the little light of an oil lamp, he held it up to examine it behind closed shades. And his breath caught for a second.

An angry fate seemed to pursue him. The strip was a long band of colors, a code for emotional profile that he could read as well as the men up on the Survey Ship. And the profile he read off now was that of a lone savage all right, but by some freak of luck one with crippled but burning talents—talents far surpassing even Jabe's own. In the range of artistic perception, the profile of the whisperer shone powerfully with a rich and varied spectrum of ability and desire—wherever the silver roofs had been mentioned.

Dropping the proof of a bitter exception to all he knew about the wild ones, Jabe beat his hands together with the rhythm of measured frustration among the people of the mine.

In the morning, the men that could be spared formed for the posse in the open space below the mine buildings and above the houses. There were some forty of them, including Jabe; all superbly mounted, all armed with rifles, side-arms and knives. Every two man unit had a saddle radio. The hounds, leashed, bayed and milled in their pack.

Standing on the platform from which mine meetings were held, the mine manager laid out the orders of the hunt. A senior engineer for many years before he had become manager, Lenkhart was stooped and ascetic-looking, with his long grey beard.

"Now," he said to them, "—man or woman, he can't have gone far since last night if he's on foot. And a man on horseback doesn't need to steal goats. You'll stay in contact with radios at all times. At the sign of any maruader or his trail, fire two spaced shots in the air. If you hear the shots fired by someone else, wait for radio orders from the senior engineer of your group before moving in. Any questions?"

There were none. To Jabe, watching, there was a heart-warming quality in the cool, civilized way they went about it. He was

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paired, himself, with Shiela's father for the hunt. He reined over next to the older man and they all moved out together. The hounds, loosed at last from their leashes, yelped and belled, streaming past them.

They moved as a group for the first two hours, back to the camp where Alden had been killed. And from there they fanned out, picked up the trail of the whisperer, running northwest and quartering away from the mining town. Then, a little later, lost the trail again. They split up into pairs, each pair with a hound or two, and began to work the possible area.

Shiela's father had said little or nothing during the early part of the ride. And Jabe had been busy thinking of his own matters. There must, he had told himself desperately, again and again after the moment of discovering the freakish quality of the whisperer's profile, be some way yet of saving the situation. Now, as they turned into a maze of small canyons, hope on the wings of an idea suddenly returned to him.

He had been assuming that the whisperer's profile was useless as a means to point up the relative purity of one of the mine people. But this need not be so. The recorder took down only what it was exposed to. If he could make a recording of the whisperer where roofs of silver and all the area of the whisperer's artistic perception was carefully avoided—the wild one would show in the color code as only the lonely savage he was. All the primitiveness, the bluntedness of the whisperer would be on show—his degeneracy in all other fields. A recording of any of the other mine people, and a recording of Jabe, matched with this second attempt, would show Jabe and the mine person's profile falling into one separate class, and the whisperer's into another. Better yet—the whisperer would be executed when he was caught. There would then be no chance of the Survey Ship sending down to make other recordings of the whisperer as a check. All that was necessary was to find the chance to make the second recording, under conditions that would be favorable. And if the whisperer was captured and held for a day or so while a trial was being set up, the chance would be there for the finding. . . .

"Jabe," said Shiela's father. "Pull up."

Jabe reined his horse to a halt and turned to face his father-in-law. Tod Harnung had called a halt in a little amphitheater of scrub pine and granite rock. As Jabe watched, the older man threw one leg over his saddle and began to fill his pipe. Like all who had achieved the status of engineer, he wore a beard, and his beard had only a few streaks of

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grey in it. His straight nose, his dark eyes like Shiela's, above the beard, were not unkind as they looked at Jabe now.

"Smoke if you like," he said.

"Thank you, sir," said Jabe. Gratefully, he got out his own pipe and tobacco, which he had not dared reach for before. The "*sir*" no longer stuck in his throat as it had in his first days among these people. He understood these signs of authority in a small, compact society which had persisted virtually unchanged since the planet's first settlement, a hundred and sixteen years before. It was such things, he was convinced, that had kept the pure silver of their strain unalloyed by the base metals of the disintegrating wild ones and the softening people of the desert and lower lands. By harshness and rigidity, they had kept themselves shining bright.

Even, he thought, lighting his pipe—and it was a suddenly startling thought—in comparison to the very Earth strain in the Survey Ship now presuming to sit in judgment upon them. For the first time Jabe found himself comparing his own so-called 'most-civilized' Earth strain with these hard-held descendants of pioneers. In such as Moran, in agents and sociologists, even in himself, wasn't there a softness, a selfish blindness bolstered by the false aid of many machines and devices?

He thought of himself as he had been ten years ago. Even five years ago. He was still largely of Earth, then, still hesitant, fumbling and unsure. He could never then have reacted so swiftly, so surely, and so decisively to Moran's announcement about the report. Above all, he could not have killed Moran, even if he had seen the overwhelming necessity of it. This world, and in particular, the people of the mine here, had pared him down to a hard core of usefulness.

"—Sir?" he said, for Shiela's father had just spoken to him again. "I didn't catch just what you said, Mr. Harnung."

"I said—you don't by any chance know this killer, do you?"

Jabe looked sharply up from the pipe he was just about to light. He sat in his saddle, the pipe in one hand, the match in the other.

"Know him?" said Jabe.

"Do you?"

"Why—no!" said Jabe. "No sir. Of course not. I don't, why should I?"

Tod Harnung took his own pipe out of his bearded mouth.

"Shiela's my only child," he said. "I've got a grandson to think of."

"I don't understand," said Jabe, bewildered.

The dark eyes looked at him, above the beard.

"My grandson," said Harnung, harshly, "will one day be an engineer like I am. There's going to be

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no stain on his reputation, nothing to make him be passed over when a vacancy occurs in one of the senior positions." There was a moment's silence.

"I see," said Jabe. "You mean, me."

"There'll be no fault about his mother's line. I'm responsible for that," said Harnung. "I've always hoped there would be no fault about his father, to be remembered against him, either."

Jabe felt himself stirred by a profound emotion.

"I swear," he said, "I never saw or heard that wild one before in my life! Alden was my friend—you know that!"

"I always thought so," said Harnung.

"You know—" said Jabe, reining his horse close to the older man, "—you know how much Shiela means to me, what you all mean to me. You know what it's meant for me to be accepted here as Shiela's husband among people —" Jabe's voice cracked a little in spite of himself. "—people with a firm, solid way of life. People who know what they are and what everybody else is. All my life, I wanted to find people who were sure of themselves, sure of the way the universe works and their own place in it. I always hated the business of not being completely sure, of only being mostly right, of having to guess and never having anyone in authority to turn to. And do you think—" cried Jabe, "I'd throw that away, all that, for some moronic savage?"

He stopped, shaking a little, and wiped his mouth with the back of his hand. For a moment, he thought he had said too much. But then Harnung's eyes, which had been steady on him, relaxed.

"No," said Harnung, "I don't believe you would." He nodded at Jabe's pipe. "Go ahead and light up there. I had to make sure, Jabe. I have my responsibility as Shiela's father."

"Yes sir. I understand." Fingers still trembling a little, Jabe got his pipe lit. He drew the smoke gratefully deep into his lungs.

"Very well, then," said Harnung. "As soon as you've finished your pipe, we'll get on."

"Sir!" said Jabe. An idea had just come to him. He took his pipe out his mouth, and turned quickly to the other man. "I just thought of something."

Harnung peered at him.

"Yes?"

"I just remembered something that killer said—" Jabe put his hand on the pommel of Harnung's saddle to hold the two horses together as they began to grow restive with the halt. "He said he'd been waching the town from some high place close at hand. Now we've circled almost a full turn back toward the town. Right ahead of us is a spot where we can cut over to the rock faces north of

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town. I'll bet that's where he's holed up."

Harnung frowned.

"He'd have had to cut back through us earlier to be there now," the older man said. "How could he have cut through us—and past the hounds?"

"Some of these desert runners could do it," Jabe said. "Believe me, sir. I know from when I was one of them. It's worth a try. And if I'm the one to lead us to where we capture him—"

Harnung scratched his beard with the stem of his pipe.

"I don't know," he said. "I'll have to radio and ask permission for you and I to try it. And if we get it, we'll be leaving a hole in the search pattern when we drop out. If it turned out later, he got away through that hole . . ."

"I give you my word, sir—"

"All right," said Harnung, abruptly. "I'll do it." He picked up his radio set from the saddle before him and rang the senior engineer of the search. He listened to the answering voice for a minute.

"All right," he said at last, and put the radio back. "Come on, Jabe."

They reined their horses around and went off in a new direction. The impatient hound that had been waiting with them leaped hungrily ahead once more, the red tongue lolling out of its mouth.

They angled their approach so as to come up on the blind side of the heights of rock north of the mine town. It was past noon when they reached the first of these and they began slowly to work around the perimeter of the rocks. This part of the mountain was all narrow canyons and sudden upthrusts of granite. The sun moved slowly, as slowly as they, across the high and cloudless sky above, as they prospected without success.

It was not until nearly midafternoon that the hound, running still ahead of them up a narrow cut in the rock, checked, stiffened, and whimpered, lifting her nose in the air. She turned sharply and trotted up a slope to the right, where she paused again, sniffing the breeze.

The two men looked off in the direction she pointed.

"The Sheep's Head!" said Jabe. "Sir, he's up on the Sheep's Head. He has to be. And there's only one way down from there."

"He couldn't see much from there unless he wanted to climb away out—well, let's look," said Harnung. They put their horses to a trot and went up the slope to emerge from the canyon and cut to their right up around an overhanging lump of bare rock that was the base of the granite pinnacle known from its shape as the Sheep's Head.

The hound was eager. A sharp command from Harnung held her to no more than the customary five

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yards in front of the horses' heads, but she shivered and danced with the urge to run. Breasting a steeper slope as they approached the top of the pinnacle, the two riders were forced to slow to a walk. The bald dome of the Sheep's Head was just a short distance vertically above them.

They were perhaps a hundred feet from a view of the summit, when the hound suddenly belled, loud and clear. Looking up together, they saw a flicker of movement, disappearing over the shoulder of the Sheep's Head. Harnung and Jabe angled their horses off in that direction, but when Jabe would have forced his animal to a trot, Harnung laid his hand on the reins.

"We'll catch him now," he said. "A walk's good enough."

"Yes sir," said Jabe.

They walked their horses on up to the crest of the rise, the hound dancing ahead of them. As they came level with the top they found themselves at the head of a long gully, cutting away down from the side of the Sheep's Head, out toward a smaller pinnacle of rock. A few short yards to the right of them, they saw all the litter of a cold camp; the half-demolished carcasses of the missing goats, and some little, toy like objects the tops of which caught the glitter of the sun. Jabe reined his horse over to them, and reached down. They were all attached to a smoothed piece of wood; and they came up as a group as he leaned from his saddle to scoop them in. Sitting in the saddle, he stared at them. Proof of the artistic perception he had read in the whisperer's profile glowed before him. They were tiny models of buildings with pieces of silver fitted onto them for roofs. And it was not just that they were well-made—it was more than that. Some genius of the maker had caught the very feel and purpose of the mine and the life of their people, in their making.

"Jabe!" snapped Harnung. "Come along!"

Jabe turned his horse to join the older man, slipping the piece of wood with the house models into his saddle bag. They headed together at a steady trot up the slope and down into the mouth of the gully.

Harnung was talking into the radio, the black bush of his bearded lips moving close to its mouthpiece.

"The rest'll move in behind us," he said to Jabe, replacing the radio on his saddle. "But we'll be the ones to take him. Let's go."

They trotted down the gully, which deepened now, and narrowed. Its walls rose high around them. The winding semi-level upon which they travelled was clear except for the occasional rock or boulder. The almost vertical rock of the walls was free of

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vegetation except for the occasional clump of brush. After a little distance, they came to another gully cutting off at near right angles; and the hound informed them with whines and yelps that the fugitive had taken this new way.

They followed.

Coming around a corner suddenly, they faced him at last. There had been no place else for him to go. This gully was blind. He stood with his back against the further rock of the gully's end, a long knife balanced in one hand in throwing position. A thin, gangling figure in scraggly beard and dirt-darkened hide clothing. At the sight of them, he flipped his hand with the knife back behind his head ready to throw; and Harnung shot him through the shoulder to bring him down.

They brought their prisoner back to the town as the last rays of the sunset were fading from the peaks where he had secretly looked down on the life of the mine. They locked him in a toolshed behind the ore-crushing mill and split up among their various homes. Word had gone on ahead of how the wild one had been taken. Shiela was waiting in their living room for Jabe. She opened her arms to him.

"Jabe!" she said. "You did it! It was *you* that led them to him!" She hugged him; but something he was holding got in her way. "What's that?"

"Nothing." He reached out and dropped the piece of wood with the little silver-roofed houses on it, down on the table beside her. "He used my silver buckle to make the roofs on them—the buckle he took from me when Alden was killed." He put his arms around her, and kissed her.

"Eat now," she said, leading him to the table. "You haven't had anything decent since breakfast." He let her steer him to his chair. She had set the table as if for a celebration, with a fresh tablecloth and some blue mountain flowers in a vase.

She sat with him. She had waited to eat until he should get back. She wanted to know all about the hunt. He listened to her questions and, a little uneasily, thought he caught an echo of the doubt that had been in the mind of her father, a doubt about his loyalty to the mine people. She did not doubt now, but earlier she must have, he thought, and now she was trying to make up for it. She came back again and again to the matter of the marauder's execution.

". . . I suppose it'll be hanging, though burning's too good for someone like—"

"Shiela!" he put his coffee cup down again in the saucer so hard some of it spilled. "Can't you at least wait until I'm done eating?"

She stared at him.

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"What's the matter?" she wanted to know.

"Nothing. Nothing . . ." he picked up the cup carefully again, but it trembled slightly in his hand, in spite of all he could do. "We have to be just, that's all. It's a matter of justice with this man."

"But he killed Alden!" Her eyes were quite large; and he moved uncomfortably under their look.

"Of course. Of course . . ." he said. "A murderer has to be punished. But you have to remember the man's limitations. He isn't like you or me—or Alden was. He hasn't any sense of right or wrong as we know it. He operates by necessity, by taboo, or superstition. That's why—" he looked appealingly at her, "we mustn't lose our own perspective and get down to his own animal level. We have to execute him—it's necessary. But we shouldn't hate him for being something he can't control."

"But Alden was your friend!" she said. "Doesn't that mean anything to you, Jabe? What's all this about the creature mean, beside the fact Alden was your friend?"

"I know he was my friend!" Even as he lost his temper with her, he knew it was the wrong thing to do, the wrong way to handle the situation. "Do you think I don't know—he was the only friend I had in this place! But I happen to know what it's like to be like that man we've got locked up in the toolshed!"

"You were never like that!" she cried.

"I was."

"You were a freighter on a pack train. You had a job. You weren't a crawling thief of murderer like that—"

"But you remembered that I might have been. Didn't you?" He half-rose from the table, shouting. He wanted to throw the accusation squarely in her face. "Last night you remembered that—"

"No!" she cried, suddenly, jumping to her feet. "You had to make it do that! And not last night. Just now! You had to mention yourself in the same breath with that animal, that crawling beast in the shape of a man!"

"He is not," said Jabe, trying to make an effort to speak slowly and calmly, "an animal yet. He is only on the way to being one. We who can still think like human beings—"

"Human!" she cried. "He's a filthy wild animal and he doesn't deserve to be hung. Why do you say he isn't? Why is it everything that's perfectly plain and straight and right to everybody else gets all tangled up when you start hashing it over? Alden was your friend and this wild one killed him. It doesn't seem bad enough that creature already stole goats that took the food out of people's mouths.—Maybe even the mouth of your own son, next winter—"

"Why, there's not going to be

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any shortage of food—" he began, but she had gone right on talking.

"—not even that. But he killed your friend. And you say he ought to be dealt with, but you want me to feel bad about it at the same time. Nothing I do ever is right, according to you! I'm always wrong, always wrong, according to you! If you feel like that all the time why did you marry me in the first place—"

"You know why I married you—"

"No I don't!" she cried. "I never did!" And she turned and ran from him, suddenly. The bedroom door slammed behind him; and he heard the bolt to it snap shut.

Silence held the house. He got up and went across to the cupboard on the opposite wall. He opened it and took out a small thick bottle of the whisky made at the mine still. For a moment he held it; and then he put it back. Reason returned to him. He felt for the recorder in his pocket. It was there; and he turned toward the door.

Quietly, he let himself out of the house.

The toolshed where the whisperer was held was unguarded and locked only by a heavy bar across the door on the outside. In the darkness, he merely lifted the bar from the door and stepped inside. For a moment he could see nothing; and then as his eyes adjusted to the deeper gloom, the lights on the outer wall of the ore-crushing mill, striking through the gaps between the heavy planks of the tool-shed wall, showed him the wild one, tightly bound.

"Hello," he said, feeling the word strange on his lips. A gaunt whisper replied to him.

"I mighty thirsty, mister."

He heard the words with a feeling of shock. He went back outside the shed to a pipe down the hill, filled the tin cup hanging from it and brought it back. The prisoner drank, gulping.

"I thank you, mister."

"That's all right," he said. Reaching in his pocket, he started the recorder. He searched for the expression on the prisoner's face in the darkness, but all he could make out was a vague blur of features and any expression was hidden. It did not matter, he thought.

Skillfully, he began to question the prisoner. . . .

He woke with a sudden jerk and came fully awake. For a second he felt nothing and then the cruel, dry hands of a hangover clamped unyieldingly upon his head and belly. He could not remember for a moment what had happened. He lay still, on his back, staring at the ceiling above his bed and trying to remember what had happened. Bright sunlight was coming around the edges of the curtain on the window; and

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Shiela was not in the bed with him.

He must be late for work—but Shiela would never have permitted that. He tried once more to put the previous evening together in his mind; and slowly, it came back.

He had got a good recording from the wild one. He had not even had to look at it to know that it was what he wanted. The prisoner was like any creature in a trap and there was nothing in him of the dangerous perception Jabe had found earlier. He had got a good recording, and after it was over, he had cautioned the prisoner against telling anyone else about the interview. But it did not really matter whether the prisoner spoke or not. They would think, whoever heard it, that Jabe had simply stumbled in on the man while drunk—to taunt or bully him.

For Jabe had made sure that he was drunk, later. But first he had made a parallel recording of himself, and one of the supervisors on night shift at the ore-crusher mill; and broadcast the results of all three to the Survey Ship from a transmitter hidden behind his own house. Then he had gone over to the bachelor's barracks to make sure of his alibi for the evening. There was always a group drinking at the barracks and it was the natural place for a husband who had just had a fight with his wife.

When he stumbled home at last, he had found the bedroom door unbolted.

Now, lying in the bed, he wondered again at the lateness of the morning hour. A thought came to him. Perhaps he had been allowed the day off by the mine manager, because of his usefulness in capturing the prisoner. He listened, but could not hear Shiela in the next room. He rolled over and saw a note from her on the bedside table.

"*—Back soon, darling. Breakfast on the stove to warm.*"

Things were evidently well once more between them. He thought of the three profiles safely messaged off to the Survey Ship the night before and a great sense of relief and happiness rose in him. He rolled out of bed and headed for the shower.

By the time he was showered, dressed, and shaved, the hangover had all but disappeared. He drew the curtain on the bedroom window and looked out on a mid-morning bright with the clear mountain sunshine. Up the little slope behind the house, near the storage shed where his transmitter hid, a clump of the same blue flowers Shiela had filled into the vase the evening before, were growing wild. Their heads stirred in the small breeze passing by, and they struck him suddenly as a token of good luck.

He turned away from the win-

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dow, walked across the bedroom, and pushing open the door to the main room of the house, stepped into it. The room was clean, tidied-up, and empty of Shiela's presence; but he had not taken more than a step into it, before he was aware of his invisible visitors.

The first glimpse showed only a sort of waveriness of the air in two corners of the room—and that was all anyone but he, or one of the other agents, would have seen. He, however, now that he had become aware of them, felt a small device implanted in the bone of his skull begin to operate. The waveriness fogged, then cleared; and he saw watching him two men from the Survey Ship, both armed and in uniform. They were, it seemed to him, remarkably young-looking; and he did not know their names. But there was nothing so surprising in that, for the personnel of the ship had turned over a number of times since he had first been landed on this world.

"Well, this is quick," he said. The lips of one of them moved and a voice sounded inside Jabe's ear.

"I'm afraid you're under arrest," the voice said. "You'll have to come up with us."

"Under arrest?"

"For the killing of—" the one speaking hesitated for a tiny moment, "—your brother."

"Brother. . . ." Jabe stopped suddenly. About him everything else seemed to have halted, too. Not merely the room and the people in it, but the world in its turning beneath them, seemed to have stopped with the word he had just heard. "Brother? . . . Oh, yes. Moran." The world and all things started to move again. He felt strangely foolish to have hesitated over the word. "Moran Halversen. We were never very close. . . ." His mind cleared suddenly. "How did you find out so soon it was me?" he asked.

Outside, at some little distance off, there was a sudden outburst of cheering. It seemed to come from the open space where they had gathered yesterday for the hunt. It drowned out the answer of the man from the ship, in his mind.

"What?" Jabe had to ask.

"I say," said the man from the ship, "your profile was one of the three you sent up to the ship, some hours ago. It showed aberrancies of pattern. It was too much of a coincidence, taken with the recent death of—Moran Halversen. We checked; and there was a good deal of indication it was you."

"I see," said Jabe. He nodded. "I—expected it," he said. "Not so soon."

"Shall we go, then?" said the man from the ship.

"Could we wait a few minutes? A minute or two?" said Jabe. He turned to look out the window.

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"My wife . . . she ought to be back in just a few minutes."

The man from the ship glanced at his watch, and then over at the other man from the ship. Jabe could feel rather than hear them inside his ear, speaking to each other on another channel.

"We can wait a few minutes, I guess," said the one who had done all the talking. "But just a few."

"She'll be right back, I'm sure," said Jabe. He moved to the window looking out on the narrow, sloping cobble-stoned street before the row of houses of which this was one. "You'll make sure she doesn't see me go?"

"Sure," said the man from the ship. "We can take care of that all right. She'll just forget you were here when she got here."

"Thank you," said Jabe. "Thanks. . . ." He turned away from the window. People were beginning to hurry down the street from the direction of the open space; but he did not see Shiela. He moved back into the room, and caught sight of the board with the little model houses, still on the table.

"I'll take this," he said, picking it up. He turned to the one who had been doing the speaking. "So the three recordings got through all right?"

The two from the ship looked at each other.

"Yes—" said one. There was a sudden rapid step outside the house. The door burst open and Shiela almost ran in. Her face was flushed and happy.

"Jabe!" she cried. "We're going to have a dance! Isn't that wonderful? Manager Lenkhart just announced it!—Did you get your breakfast yet? How do you like the holiday?" She spun about gleefully. "And—guess?"

"What?" he said, filling his eyes with the sight of her.

"Why, they're going to burn him after all! Up at the pass. Isn't that marvelous? And we'll all have an outdoor dinner up there, and burn him just as it starts to get dark, then everybody comes back here for the dance. Isn't that wonderful, Jabe? We haven't had a dance for so long!"

He stood staring at her.

"Burn?" he said stupidly. "Burn? But why. . . ."

"Oh, *Jabe!*" she pirouetted about to face him. "Because we haven't caught one like this for such a long time, of course." She held out her arms to him. "Everybody thought because production in the mine wasn't up last month, Manager Lenkhart wouldn't let us have anything but an ordinary hanging. But the staff engineers pleaded with him and said how badly everybody needed a holiday—so we got the whole thing." She reached for him, but he stepped back, instinctively. "Burning, and picnic, and dance . . . ! Jabe—" she said, stopping, and looking at

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him in some puzzlement. "What's wrong? Aren't you happy—"

The word died suddenly on her lips. Suddenly she stopped moving. She stood arrested, like a wax figure in a museum—only her chest moved slightly with her breathing. Jabe made a move toward her, but one of the armed men stopped him.

"No," said the voice in his head. "She's in stasis until we leave. Better not touch her."

Jabe turned numbly toward them.

"No . . ." he said. "I sent recordings that proved these people were different. You know about them. What she says isn't what it sounds like. I tell you, those recordings. . . ."

"I'm sorry," said the voice. Both men were looking at him with something like pity on their faces. "You're overadapted, Jabe. You must have suspected it yourself. You couldn't seriously believe that thousands of men working over a ten year period could come to a wrong conclusion. Or that that report Moran was going to send in would be the only way we'd have of knowing about things here—"

"I tell you no!" said Jabe, breaking in. "I *know* these people here. They're different. Maybe I am a little . . . overadapted. But these people operate according to standards of justice and conscience. It's not just taboo and ritual, not just —"

"Come along, Jabe," said the voice and the two men moved in on him. "You'll have a chance to talk, later."

"No," he said, backing away from them. People were beginning to stream past outside the front window. Jabe evaded the two men and went to the door, opening it. At the top of the street, leading from the square, two of the bachelors appeared carrying rifles. The prisoner walked silently between them.

"Jabe—" began the voice in his head.

"I tell you, no!" said Jabe, desperately. "Shiela's expecting. She makes things sound different than they are."

"Oh, Jabe!" said one of two women, hurrying past. "Did you hear about the jam? You'll have to tell Shiela!"

"Jam?" said Jabe, stupidly.

"That marauder. They asked him what he wanted and he wanted bread and jam, for a last meal. Imagine. Two pounds he ate! Not my jam, thank goodness—"

"Come on, Etty!" said the other woman. "All the good places'll be gone—" They hurried off.

The two bachelors with the rifles and the prisoner were only a few steps behind the women.

"Wait—" said Jabe, desperately.

The bachelors stopped at the command of a senior and married man. The prisoner also stopped.

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He had not been cleaned up, in his ragged suit of badly-tanned hide, except for a clean white bandage on his arm. The whites of his eyes were as clear as a child's and his beard was the soft silk of adolescence. All three of them looked inquiringly at Jabe.

"Wait," said Jabe again, unnecessarily. He appealed to the nearest bachelor. "Why did Manager Lenkhart do this?"

The bachelor frowned, looked at the other bachelor, then back at Jabe. He guffawed in uneasy fashion.

"What was his reason?" said Jabe.

The bachelor shrugged elaborately. He looked at the ground, spat, and kicked a pebble aside.

"We've got to get going," said the other bachelor. He looked over at the prisoner, who had moved aside to reach up and feel the low edge of the metal roof on Jabe's cottage, the roof made of corrugated aluminum.

"Silver," he said, glancing a moment at Jabe. "It's mighty rich —and fine."

The bachelors guffawed again. They took the prisoner's elbows and marched him off, down the slope of the road.

"You see there? You see?" said Jabe, staring after them, but speaking to the invisible warders just behind him. "He thought the sheet metal was silver, that the roofs were made of silver. There's your true degenerate. But the men with him—"

"Let's go, Jabe," said the voice gently in his head. He felt the warders take hold of him on either side. Invisibly, they led him out into the street, on the same way down which the other prisoner had already gone. He felt the uselessness of it all suddenly cresting over him like a wave, the sudden realization that there was no hope and there had never been any hope, no matter how he had tried to delude himself. He had known it from the beginning; but something in him would not let him admit the truth about these people —about his own wife, and his own child soon to be born—to himself.

From the beginning he had known that there was no saving them. Yet he had tried anyway—had killed his own brother in an attempt he knew was quite hopeless, to save a people who were already regressing to the animal. Why? Why had he done it? He could not say.

All he knew was that there had never been any choice about it—for him. He had done what he had to do.

"Come along now," said the gentle voice in his head. Dumbly, and plodding like a donkey, he let them lead him as they would. To where, it no longer mattered. ◄

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Reader, if with melancholy satisfaction, you consider that you are one of those leading a life of quiet desperation, and imagine longingly that you would be happier or better off in another time or place, pause: reflect upon the curious experience of Maître *Duplessis (he who was informed of the important truth that one may be innocent, and be hung from a hook) . . . Concerning* Maître *Damonti, author of this charming little story, we are able to say only that we are informed that he is a lawyer, and lives in Brussels. We suspect, though, that he may have been impaled in the Ming Dynasty or riddled at Waterloo—though, of course, we most sincerely hope not.*

THE NOTARY AND THE CONSPIRACY

by Henri Damonti

(Translated from the French by Damon Knight)

FOR SOME YEARS NEITHER MASTER Duplessis' work nor his home life had brought him any satisfaction. Accordingly he was a notary ripe for any extravagance. But the extravagances known as mistresses, gambling, speculation and politics hardly tempted him at all.

Helplessly and sadly his wife watched him waste away. His daughter Martine, who was twelve, understood nothing and occupied herself actively with a butterfly collection.

One day, in the local paper, under the heading "Miscellaneous," Master Duplessis read the following announcement:

I GUARANTEE UNUSUAL DIVERSIONS—NO ENTRANCE FEE—ONE TRIAL WILL CONVINCE YOU—APPLY NOW—BECOME A MEMBER OF OUR SOCIETY—DISCRETION ASSURED—ADDRESS BOX 322628.

The notary was convinced that it must be something to do with a

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group of philatelists, or else, more probably, with a gang of degenerates. A pleasure-lover's club. In that case his convictions would forbid him, he thought, to take any action in the matter. Three days later, while he was studying a deed of gift with charges, the telephone rang.

"Master Duplessis?"

"Yes."

"Your application has been accepted. We have just one place vacant. Your appointment is for next Saturday at 8:30, at 18, rue de la Manufacture, second floor. In case of any indiscretion on your part, the appointment will be legally canceled, costs and expenses to be paid by you."

"Who is speaking?"

". . . . ."

"Hello—Who is calling?"

The receiver clicked. The appointment had been made, but the voice was not unknown. To whom, then, did that voice belong? He did not speak about it to anyone. One evening, it was a Thursday, while buying a pack of Gauloises, the notary suddenly recognized the voice. It belonged to Gilles, the son of the widow who kept the tobacco shop. Gilles was finishing his law course.

"What am I getting myself into? A hoax perpetrated by some students, who will make a laughing-stock of me." His imagination leaped all the same, he ate with a better appetite; in short, he was beginning to enjoy himself. On Saturday evening he left the house, under the pretext of discussing a brief with an attorney.

"Can't he come to see you, this attorney?" his wife asked.

"He has a slight fever."

The attorney really did have the grippe, and Master Duplessis was sure he would not take it into his head to telephone after dinner. By way of playing safe, however, he took his phone off the hook before leaving.

It was cold when the notary turned into the rue de la Manufacture. Before him, among the few passers-by, he recognized Dr. Labroque. Dr. Labroque divided his patients into three categories. To begin with, the sinners. According to this physician, the sinners were sick because they had disobeyed the Divine Will, by committing adultery and robbing their neighbors. The second category was that of the malingerers. A category similar to the first, but still more vicious and crafty—sinners in the rough. The real invalids were those who had ptosis and fallen stomachs, like himself. For ptotic patients he had a fatherly affection, never asking them for a centime in fees, only too happy to share his knowledge.

In fact, Dr. Labroque was an excellent physician, at once suspicious and sympathetic. A bachelor, he had never met the ptotic woman of his dreams.

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Suddenly Dr. Labroque turned.

"Ah, Duplessis! Taking a walk? Good evening."

"Me?"

"I'll bet you have an appointment . . ."

"What makes you think that?"

"You have that look about you. Since we're both going to 18, rue de la Manufacture, let's walk together."

Master Duplessis did not say a word. Who could have believed that Dr. Labroque, so fierce, so pious, was an accomplice in villainy?

On the second floor of number 18, Dr. Labroque tapped three times lightly on a door. After a silence, the door opened by itself upon a dimly lit room where five or six people sat around a table. The notary first recognized Gilles, the one who had telephoned him; then his own part-time housekeeper, Madame Renard. He also saw a girl in her twenties, almost pretty.

Madame Renard stood up and said, "Master Duplessis, our hobby club has voted unanimously to admit you as a new member. Be kind enough to take your place. And now let us pass to the business of the evening."

Never had a housekeeper spoken to him in that tone. The hobby club, it seemed, furnished each of its members with a second life which he could lead simultaneously with his own. But it was a life in the past. It was a first-rate hobby, and who could say, thought Master Duplessis, that other similar hobby clubs had not existed throughout the world always?

Thus Madame Renard, the president, in her second life was maid of honor to Eugénie de Montijo, Empress of France. Dr. Labroque, sticking to his last, was a physician in Rome under Caligula and trembled every day for his life. The strange young woman was about to marry a musician, and in her second life, her name was Constance Weber.

It was explained to the notary that at the moment he had a choice between two vacant posts. That of a scribe attached to a temple of Rameses II, or that of a notary in Florence toward the middle of the 15th century. Secretly fascinated, Master Duplessis did not hesitate; he chose the Florentine notary.

"But how can I be a notary now and a notary in the fifteenth century?"

"It happens automatically," said Madame Renard.

"Anyhow, you're about to try it out," added Dr. Labroque. "So drink this unimportant little liqueur."

On the instant the notary saw himself become Messer Giovanni Dorlano, a notary close to the palace of the Medicis. Giovanni was arguing with his young wife about the necessary betrothal of Giovanna, who was sixteen and the issue of a previous marriage.

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Master Duplessis stared with bewilderment at his new bedroom, decorated with chased coffers and magenta velvet, and his Florentine wife, young, graceful —so much younger than his spouse in ordinary life . . .

"You have no choice, Messer Giovanni. She must be married."

"But to whom?"

"To whom? How dreamy and absent-minded you are nowadays . . . The abbé remarked on it to me again today."

"You seem to be seeing a lot of that abbé."

Master Duplessis was surprised by this remark. Without realizing it, he had ceased to be a notary of the atomic age, in order to become jealous of a little abbé and madly in love with a young woman with green eyes.

"He was with me last night at the fireworks, since my husband had other things to do. . . ."

"But you know very well that I'm looking over some property deeds for the Prince. . . ."

"Why don't you marry the Prince?"

"Don't raise your voice, I beg you."

Just as the notary was about to become really angry, he found himself again at 18, rue de la Manufacture.

"Well, how do you like Florence?" asked Madame Renard.

"There's nothing more beautiful."

"Then it's perfect."

"Do I pay now?"

"Each member pays at the end of the entertainment. We meet every month to settle certain difficulties. Don't let me forget. Your entertainment will last for one month."

Master Duplessis returned dreamily to his domicile. His wife was not yet in bed. He said in a loud voice, "I believe you're right: she must be married."

"Who?"

"What do you mean, who? The girl."

"Martine? She's twelve years old. I was absolutely right, you're crazy."

"Excuse me. I was thinking of a problem given me by a client."

In truth, already he was thinking of nothing but living in Florence. Soon he discovered that he could live in Florence and at the same time carry on his work as before. At Florence he got up early, rattled off a little mass as quickly as possible, and served himself a good slice of roast pig which he washed down with a wine from his own vineyard. Then he thoroughly scolded his four clerks who were already at work, and went to take the air as he did every morning. On his return, his wife Maria welcomed him; attentions were heaped upon him, he was happy. Moreover, Messer Dorlano was a member of the Prince's secret council, and his opinions upon

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all that concerned the properties and the economic life of Florence were often more weightily considered than those of the rich bankers of the city or of the Prince's French astrologer.

Messer Dorlano let the days pass, and occupied himself less and less with Master Duplessis' work. Master Duplessis was asked to become a candidate in the municipal elections. He refused. The same day, by chance, he met Dr. Labroque again; he found the physician pale and weary.

"I should like to talk to you, Duplessis, about what has happened to me. It's terrible."

"Are you sick?"

"It's worse . . . You know that . . ."

Dr. Labroque interrupted himself, casting a glance to the right, wiped his forehead and continued: "You know that I also live in Rome . . ."

"Yes, I know."

"Three days ago I was thrown into prison."

"You?"

"I'm chained in the most horrible prison in Rome. I'm about to croak of hunger and thirst. I'm hungry, Duplessis, I'm hungry . . ."

"But see here, Doctor, don't shout. Go home and have something to eat . . ."

"I'd be hungry just the same. And the chains hurt me. Goodbye. I must leave you—an emergency. It's a malingerer, but I'm going to see him anyhow. . . ."

Then the physician seized Master Duplessis by the sleeve and whispered, "Caligula is mad . . . raving mad . . . Save me, Duplessis . . . Get me out of prison . . . I've been tortured. Down through the centuries, there's no problem more important than that of torture, aside from that of ptosis."

This meeting dismayed the notary, coming just on the day when Giovanna was promised in marriage and when the Prince, always benevolent, had given him an extraordinary ring and some aromatics from Smyrna. He congratulated himself on having chosen a city as delightful and as calm as Florence in the time of the Medicis. Unfortunately there was only a week left of his diversion, and Maria was more beautiful than ever.

The following day, while his present-day wife was announcing that her father the president of the corporation of barristers, Paul de Rédy, was coming to dinner Saturday night, which was tomorrow, Maria, pressing herself against him frantically, told him that pilgrims from Pisa had brought the plague, it's true I assure you I heard it from the wife of Pietro the one-eyed, a child has already died of it.

What did he care about dinner Saturday night with his father

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in-law, while the plague threatened Florence? . . . Fifteen years earlier, Messer Dorlano had done as all the other merchants of Florence had done. He had ridden on horseback to his summer residence well outside the city, taking with him his wife, his child and a casket containing his silver and his most beautiful jewels. One month later he had returned to his hearth, happy to have lost nothing in the disaster but a few cousins and two old domestics.

"Maria, have my horse saddled. You'll join me tomorrow with Giovanna."

"I'll go give the order. But I forgot to tell you that the abbé wants to speak to you urgently."

"What does he want of me?"

"I don't know. I'm afraid."

"I never liked that abbé."

A moment later Messer Dorlano knew why. Without preliminaries, in a low voice, the abbé informed him that the glorious Prince now governing Florence had succeeded in foiling a conspiracy against his life, that the principal malefactors had been unmasked and arrested, but you, Messer Dorlano . . .

"What have I to do with this conspiracy? Leave me in peace. The plague is enough. Good evening, abbé."

"Messer Dorlano, the Prince is persuaded that you are the instigator of the conspiracy."

The notary was stunned by this news. Placed as he was, he knew very well that the Prince invented at least one conspiracy a year, hanged a few merchants taken at random, and since the poor wretches had confessed previously under torture, the Prince's spirit was quickly appeased.

"If I flee the plague for my villa, that will confirm the Prince's suspicions, and if I stay here," he thought, "I won't escape the plague. . . ."

Master Duplessis left his office for the local library. "I must find a history of Florence and the Medicis; perhaps there will be something about me in it . . ."

But on the doorsill of the library an immense weariness overtook him, and he felt himself forgetting why he had come.

"If I haven't conspired, they can't do anything to me. I've always been loyal to the Prince." The open air made him feel a little better. Wanting to confide in someone, he went to see Dr. Labroque.

"But my dear Labroque, you look twenty years younger."

"Duplessis, I'm the happiest man in the world. The monster, the abominable tyrant, Caligula, has just been killed. Embrace me, Duplessis. I live again. And now, I've found a place as ship's doctor aboard a galley that sails this evening. It'll be a cruise, and for ptosis, a sea voyage . . . Come

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with me, Duplessis. I'll tell Quintus Marcus you're a friend of mine. . . . But what am I saying? How could you know my friend Quintus Marcus?"

That evening Master Duplessis found his housekeeper helping his wife prepare dinner.

"Madame Renard, something terrible has happened. . . . I'll talk fast, my wife might hear us—I'm implicated in a conspiracy in Florence. . . ."

"Ah?"

"I know the Prince is looking for me—"

"Ah, yes?"

"What can I do?"

"I don't know, Master. There's nothing to do. You chose to live in Florence. There are those who live, there are those who die. Let me be, your wife is coming back."

Accordingly he decided to see the Prince, and put off going to the country until tomorrow. He found the Prince in the chapel of his half-deserted palace. At that instant, Master Duplessis was saying to his father-in-law, "Won't you have some more of this fish? It seems perfect to me."

The Prince, on his knees, turned toward the notary. "Notary, I'll have you hung from a hook."

"Prince, I beseech you to listen to me. I'm innocent."

"One can be innocent, and be hung from a hook."

"I've never betrayed you . . ."

"Come now . . . Leave me, notary. I have a fever, I am coughing. Captain Rogni is looking for you. He has an order to kill you. Yesterday I gave him a gold-hilted dagger. He wants to try it out on you. Afterward he'll hook you up. Leave me."

The notary plunged into an interminable discussion with his father-in-law on the Berlin problem, decolonization and the future of Europe. He took advantage of it to wander through the deserted streets of Florence. In the afternoon he had sent off Maria and his daughter, and had asked a friend, the banker Grassi, to look after them. Now Messer Dorlano, with dry mouth and heavy head, could barely hold up his torch.

"No one will come looking for me in the plague of Florence, and tomorrow the Prince will have forgotten his delirium."

Suddenly then he remembered a meeting he had had three months ago with the Prince's nephew, Duke Orlando. The Duke had really come to ask him to become a member of a secret society. He had given an evasive reply.

"Well, are you dreaming? I've just checked you, and I warn you, your queen is in danger."

Master Duplessis hardly heard the remarks of his father-in-law as they played chess. At that moment he was entering his house

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in Florence with a beating heart, convinced that he had had other interviews with Duke Orlando, and that the conspiracy was not an invention of the Prince.

"I, who had everything to be the happiest notary in Florence, the prettiest wife, the best wine, one of the most enviable fortunes, why should I have got myself mixed up with princes, prisons and conspiracy?"

"My dear boy . . . You've just lost your turn. You're not yourself. What does a notary think about while playing chess? Just imagine, Amédée, I saw a strange advertisement in the paper . . . They promise unusual diversions. I have a good notion to answer it. . . ."

"I don't advise you to."

"Ah, if we listened to the notaries . . . In fact, I've already answered it. . . ."

Then Messer Dorlano shut himself up in his room. The domestics had fled, after making fires in all the fireplaces in order to frighten away the demon of the pestilence. The notary thought, "I'll leave in the morning. I'll go to France. I know a captain in Genoa, who—"

This decision gave him a little courage. About eleven o'clock at night, Master Duplessis remembered that tomorrow night at this time his month's diversion would be up. In order to avoid any nasty surprises, he decided to stay in his room, firmly resolved not to go back to Florence again. In spite of all his efforts, he felt himself once more hurled into the skin of Messer Dorlano counting his emeralds, shivering, his head wrapped for some unknown reason in a warm towel. Unable to sleep, he fell to praying.

In the morning Madame Duplessis found her husband feverish. She called Dr. Labroque.

"Doctor—I have to talk quietly. At the moment I am shut up in a house in Florence where the pestilence is raging. The Prince is looking for me. What shall I do?"

"But nothing at all, my dear fellow. You'll just have to wait. To begin with, you haven't got the pestilence, just a good grippe. A little penicillin, and tomorrow you'll be on your feet."

"You don't understand. I tell you they want to kill me . . ."

"Why did you choose Florence? I know a carpenter who spent two months as scribe to a Pharaoh. He came back very pleased. Try to perspire, and talk a little less."

Messer Dorlano buried himself under the covers. He distinctly heard all the bells of Florence calling God and all the saints to the aid of the city of the Medicis. Then suddenly the door opened. "I'm lost," thought the notary, "here is my assassin. Virgin Mary protect me. O sweet saints of Paradise have pity on Messer Giovanni

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Dorlano, Maria how beautiful you were and how I loved you. . . ."

"Messer Dorlano, Messer Dorlano—"

"Who calls me?" asked the notary, hidden in his eiderdown.

"It's I, the abbé. The Prince is dead . . ."

"What?"

"You heard me. He is dead."

"It's a trap. Behind me, Satan."

It was no trap. The Prince had died, not of the plague, but of the golden dagger of Captain Rogni.

At dawn the happy notary left for the country. He had been saved from the plague and the Prince. At that moment in the 20th century, his wife was handing him a steaming bowl of coffee. Decidedly he felt better.

"I must be sure," Master Duplessis told himself, "to choose a less troubled era for my next entertainment. Why not be a friend of Cardinal Richelieu, or the Caliph Haroun El Rashid himself? . . . I must speak to Madame Renard about it. Even if it costs more . . ."

The occasion did not arise, for a troop of brigands was lying in wait, a league outside Florence, for the unfortunate merchants who were fleeing the city. At the moment when he was enjoying his coffee and reading the death notices in the local paper, the tallest of the brigands, a redhead with a terrible reputation, stuck a knife in his throat. The notary had neither time to cry out, nor to return to the present.

The notary's disappearance made a sensation; but no more so than the dozens and dozens of persons who disappear every day here and there. People suppose they have gone to Patagonia, or holed up in a distant convent, while in reality, as members of a hobby club, they have been impaled in the Ming dynasty or riddled at Waterloo.

This incomprehensible disappearance did not prevent the hobby club, presided over by Madame Renard, to meet again on the following Saturday and to welcome Master Duplessis' father-in-law as a new member. The president of the corporation of barristers, Paul de Rédy, chose to become Tamerlaine.

Who would have dreamed that so honorable a man could have such tastes?

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EDITORIAL

The first SF serial we remember reading was Jack Williamson's *The Legion of Space,* in the old *Astounding.* The hero's name we have forgotten, but he had a W. C. Fields-like sidekick named Giles Habibula, and the heroine was Alladaree Anthar. Miss Anthar (and she alone) knew how to construct the Secret Weapon which could save us from the Enemy—it was called AKKA. Breathlessly we followed their adventures, but AKKA worried us: how was it *pronounced*? To ourselves we called it Ay Kay Kay Ay, certain this was wrong, too embarrassed to ask. This Labor Day weekend at the 20th Annual Science Fiction Convention we met Mr. Williamson, presented our respects, chatted, finally and diffidently asked how *was* it pronounced? "Why," said Jack Williamson, "*I* always pronounced it Ay Kay Kay Ay . . . "

These Conventions are always so much enjoyed that we urge all who haven't attended one to do everything short of stealing the egg money in order to make the next one. To avoid the ever-temptation of name-dropping, we will mention only those other writers we had the pleasure of meeting for the first time at Chicago—Edmond Hamilton, Lloyd Biggle, Philip Jose Farmer, Wilson Tucker, Clifford Simak, and Marion Zimmer Bradley: gentlemen and lady, it *was* a pleasure. Our apologies to any others whose faces remain in our memory in a happy blur which will not focus into names. We value the new-made face-to-face acquaintance of scores of those good and loyal fans, ranging from the antediluvian to the neo, whose interest and zeal help keep us a-going.

Robert Bloch (whose presence was one of the joys of the occasion) will be doing us an article on SF Conventions—one of three cognate pieces, with Wilson Tucker discussing the organizational aspects of fandom and Terry Carr reporting on SF amateur magazines—so we will eschew Convention comments-at-length, here. Those who weren't at ChiCon III and who would like to see who *was,* may order a photo-album with text, Convention Annual No. 2, from Frank Prieto, Jr., Box 225, R.D. # 1, Warners, N.Y., for $1.60-$2.00 after December 10. No other *genre* provides the opportunity for personal communication between writer and reader, writer and writer, reader and reader, as does SF: and the annual Convention offers probably the happiest opportunity of all. *D.C. In '63*—see you there?

—Avram Davidson

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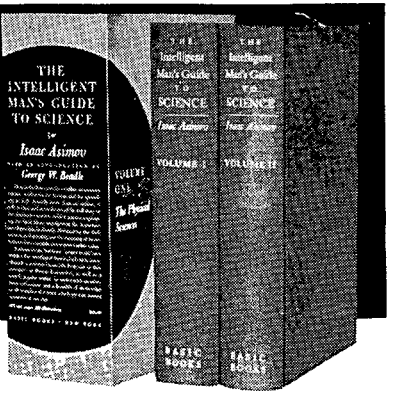

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